Series SX3000/5000/7000
Body Ported
Valve Single Unit

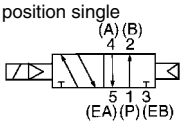
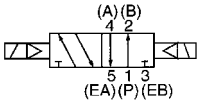
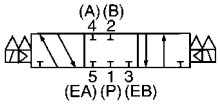
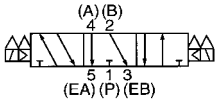
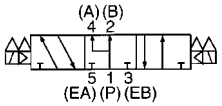
How to Order

SX [5] [1] 20 – [5] [N] [L] [ ] [ ] – [01] [ ] – [ ]

Series

3	SX3000
5	SX5000
7	SX7000

Type of actuation

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

Rated voltage

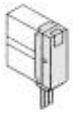
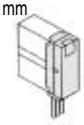
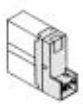
5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.

Electrical entry

Grommet	L plug connector	M plug connector	
G: Lead wire length 300 mm 	**L:** With lead wire (Length 300 mm) 	**M:** With lead wire (Length 300 mm) 	**MN:** Without lead wire 
H: Lead wire length 600 mm 	**LN:** Without lead wire 	**LO:** Without connector 	**MO:** Without connector 

* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Light/Surge voltage suppressor

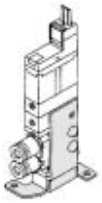
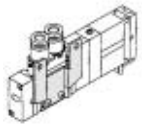
Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

Manual override

Nil: Non-locking push type 

D: Push-turn locking slotted type 

Bracket

Nil: Without bracket
F1: With foot bracket 
F2: With side bracket 

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size
Thread piping

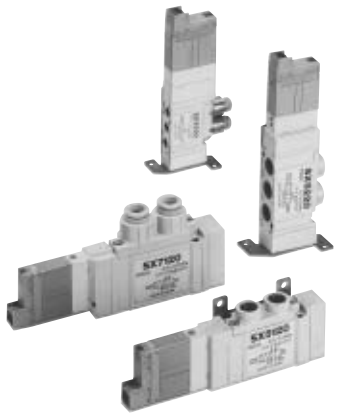
Symbol	Port size	Applicable series
M5	M5 x 0.8	SX3000
01	1/8	SX5000
02	1/4	SX7000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fittings for ø4	SX3000
C6	One-touch fittings for ø6	
C4	One-touch fittings for ø4	SX5000
C6	One-touch fittings for ø6	
C8	One-touch fittings for ø8	
C8	One-touch fittings for ø8	SX7000
C10	One-touch fitting for ø10	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
N9	One-touch fitting for ø5/16"	SX7000
N11	One-touch fitting for ø3/8"	



Specifications

Series		SX3000	SX5000	SX7000
Fluid		Air		
Internal pilot Operating pressure range (MPa)	2 position single	0.15 to 0.7		
	2 position double	0.1 to 0.7		
	3 position	0.2 to 0.7		
Ambient and fluid temperature (°C)		Max. 50		
Max. operating frequency (Hz)	2 position single, double	10	5	5
	3 position	3	3	3
Manual override		Non-locking push type, Push-turn locking slotted type		
Pilot exhaust method		Common exhaust type for main and pilot valve		
Lubrication		Not required		
Mounting orientation		Unrestricted		
Impact/Vibration resistance (m/s²)Note)		150/30		
Enclosure		Dusttight		

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

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

SV
SZ
SY
SYJ
SX

Made to Order **Made to Order Specifications (For details, refer to pages 1-6-124 to 1-6-138.)**

Solenoid Specifications

Electrical entry		Grommet (G)/(H), L plug connector (L), M plug connector (M)
Coil rated voltage (V)	DC	24, 12, 6, 5, 3
Allowable voltage fluctuation		±10% of rated voltage
Power consumption (W)	DC	0.6 (With indicator light: 0.65)
Surge voltage suppressor		Diode
Indicator light		LED

Response Time

Note) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage)

SX3000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)	
	Without light/surge voltage suppressor	With light/surge voltage suppressor
		S, Z type
2 position single	12 or less	15 or less
2 position double	10 or less	13 or less
3 position	15 or less	20 or less

SX5000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)	
	Without light/surge voltage suppressor	With light/surge voltage suppressor
		S, Z type
2 position single	19 or less	26 or less
2 position double	18 or less	22 or less
3 position	32 or less	38 or less

SX7000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)	
	Without light/surge voltage suppressor	With light/surge voltage suppressor
		S, Z type
2 position single	31 or less	38 or less
2 position double	27 or less	30 or less
3 position	50 or less	56 or less

Flow Characteristics/Weight

Model/Series SX3000

Valve model	Type of actuation		Port size		Flow characteristics						Weight (g)	
					1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)				
			1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	Grommet	L plug connector M plug connector
SX3□20-□-M5	2 position	Single	M5 x 0.8	M5 x 0.8	0.61	0.44	0.16	0.64	0.45	0.18	62	63
		Double									70	72
	3 position	Closed center			0.48	0.46	0.13	0.47	0.43	0.13	73	74
		Exhaust center			0.47	0.42	0.13	0.47 [0.44]	0.41 [0.37]	0.13 [0.12]		
		Pressure center			0.50 [0.41]	0.48 [0.35]	0.15 [0.11]	0.47	0.43	0.13		
SX3□20-□-C4	2 position	Single		C4 (One-touch fitting for ø4)	0.72	0.29	0.18	0.64	0.34	0.17	72	73
		Double									80	81
	3 position	Closed center			0.59	0.28	0.15	0.59	0.30	0.15	82	84
		Exhaust center			0.63	0.35	0.16	0.42 [0.41]	0.34 [0.37]	0.11 [0.11]		
		Pressure center			0.76 [0.46]	0.42 [0.34]	0.21 [0.12]	0.59	0.29	0.15		
SX3□20-□-C6	2 position	Single		C4 (One-touch fitting for ø6)	0.76	0.30	0.19	0.65	0.39	0.17	68	69
		Double									76	77
	3 position	Closed center			0.76	0.55	0.24	0.60	0.33	0.16	78	80
		Exhaust center			0.65	0.32	0.16	0.64 [0.42]	0.31 [0.36]	0.17 [0.11]		
		Pressure center			0.77 [0.49]	0.34 [0.43]	0.21 [0.15]	0.61	0.34	0.16		

Note) [ ]: Denotes normal position.

Model/Series SX5000

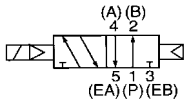
Valve model	Type of actuation		Port size		Flow characteristics						Weight (g)	
					1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)				
			1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	Grommet	L plug connector M plug connector
SX5□20-□-01	2 position	Single	Rc 1/4	Rc 1/8	1.9	0.35	0.49	2.4	0.39	0.61	75	76
		Double									83	84
	3 position	Closed center			1.7	0.43	0.45	1.8	0.35	0.46	88	90
		Exhaust center			1.5	0.44	0.41	2.5 [1.5]	0.32 [0.43]	0.59 [0.40]		
		Pressure center			2.2 [0.91]	0.46 [0.58]	0.61 [0.28]	1.8	0.38	0.46		
SX5□20-□-C4	2 position	Single		C4 (One-touch fitting for ø4)	0.75	0.43	0.20	0.85	0.64	0.30	83	84
		Double									91	92
	3 position	Closed center			0.74	0.40	0.19	0.84	0.57	0.28	96	97
		Exhaust center			0.75	0.36	0.19	0.84 [0.84]	0.64 [0.53]	0.30 [0.27]		
		Pressure center			0.78 [0.71]	0.44 [0.37]	0.21 [0.18]	0.84	0.57	0.27		
SX5□20-□-C6	2 position	Single		C6 (One-touch fitting for ø6)	1.5	0.33	0.33	2.0	0.37	0.52	78	79
		Double									86	87
	3 position	Closed center			1.3	0.31	0.33	1.6	0.32	0.39	91	92
		Exhaust center			1.3	0.33	0.33	1.8 [1.4]	0.35 [0.37]	0.44 [0.35]		
		Pressure center			1.7 [0.80]	0.31 [0.47]	0.42 [0.23]	1.7	0.33	0.44		
SX5□20-□-C8	2 position	Single		C8 (One-touch fitting for ø8)	1.9	0.21	0.45	2.3	0.29	0.57	79	80
		Double									87	88
	3 position	Closed center			1.6	0.29	0.39	1.7	0.38	0.46	92	93
		Exhaust center			1.4	0.38	0.39	2.0 [1.5]	0.37 [0.41]	0.52 [0.43]		
		Pressure center			2.2 [1.6]	0.32 [0.44]	0.56 [0.44]	1.8	0.41	0.50		

Note) [ ]: Denotes normal position.

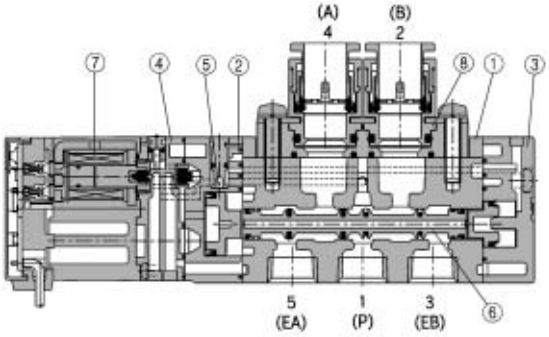
Construction

Series SX

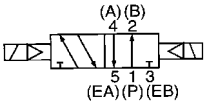
JIS Symbol
2 position single



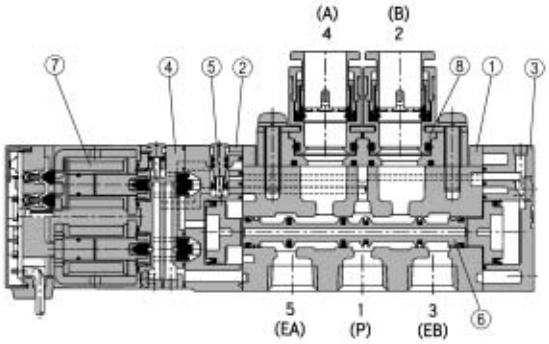
2 position single



JIS Symbol
2 position double

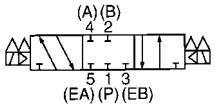


2 position double

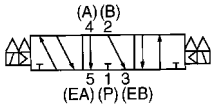


3 position closed center/exhaust center/pressure center

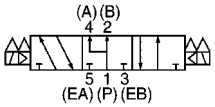
JIS Symbol
3 position closed center

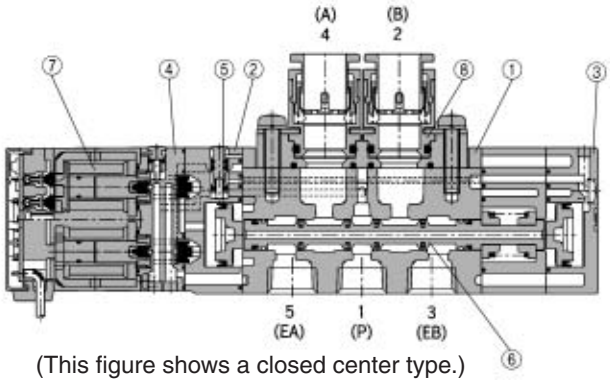


3 position exhaust center



3 position pressure center





(This figure shows a closed center type.)

How to Order Connector Assembly for L/M Plug Connector

Positive common specifications

For single solenoid: **SX100-40-4S-**

For double solenoid, 3 position: **SX100-40-4D-**

Negative common specifications

For single solenoid: **SX100-41-4S-**

For double solenoid, 3 position: **SX100-41-4D-**

Lead wire length

Nil	300 mm
6	600 mm
10	1000 mm
15	1500 mm
20	2000 mm
25	2500 mm
30	3000 mm
50	5000 mm

For detailed information on connector assembly, refer to page 1-6-8.

Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted (SX3000: Zinc die-casted)	White
②	Adapter plate	Resin	White
③	End plate	Resin	White
④	Pilot body	Resin	White
⑤	Piston	Resin	—
⑥	Spool valve assembly	Aluminum, HNBR	—
⑦	Molded coil	Resin	Gray

Replacement Parts

No.	Description	Part no.
⑧	Port block assembly	See "How to Order Port Block Assembly" on page 1-6-7.

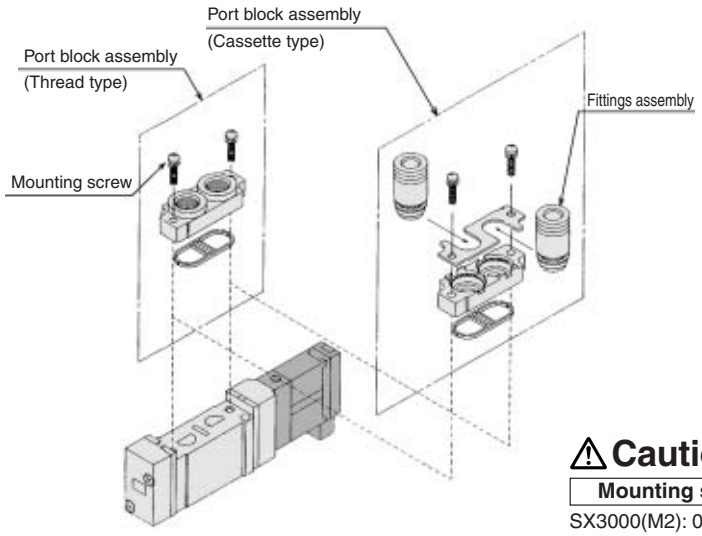
Bracket Assembly No.

Description	Part no.
Bracket (For F1)	SX$^{3}_{5}$000-16-1A (With mounting screw)
Bracket (For F2)	SX$^{3}_{5}$000-16-2A (With mounting screw)

How to Change Port Block Assembly

The cylinder port block assembly can easily be changed. When changing block assembly, correct screw torque must be achieved. Cut off the air supply to confirm that no air is left in the manifold before starting operation. Remaining air or inappropriate installation may cause an accident.

● For SX5000



⚠ Caution

Mounting screw tightening torques

SX3000(M2): 0.17 N·m SX$\frac{5}{7}$000(M3): 0.8 N·m

∗ Refer to "How to Order Port Block Assembly" below for parts no.

How to Order Port Block Assembly

SY □ 000−6A− □ □

Series

Symbol	Series
3	SX3000
5	SX5000
7	SX7000

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size

Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SX3000
01	1/8	SX5000
02	1/4	SX7000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
C8	One-touch fitting for ø8	SX7000
C10	One-touch fitting for ø10	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
N9	One-touch fitting for ø5/16"	SX7000
N11	One-touch fitting for ø3/8"	

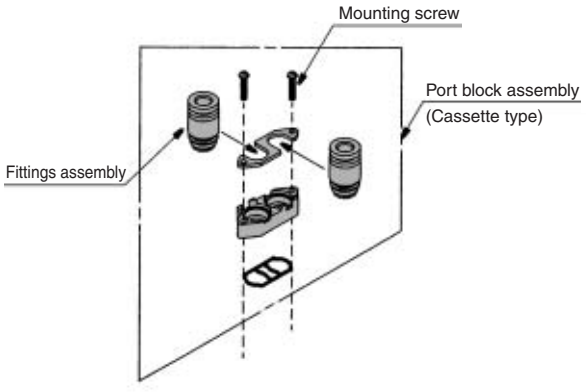
∗ Only replacement of the fittings assembly is possible.

Metric size

SX3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SX5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8
SX7000	One-touch fitting for ø8	VVQ2000-51A-C8
	One-touch fitting for ø10	VVQ2000-51A-C10

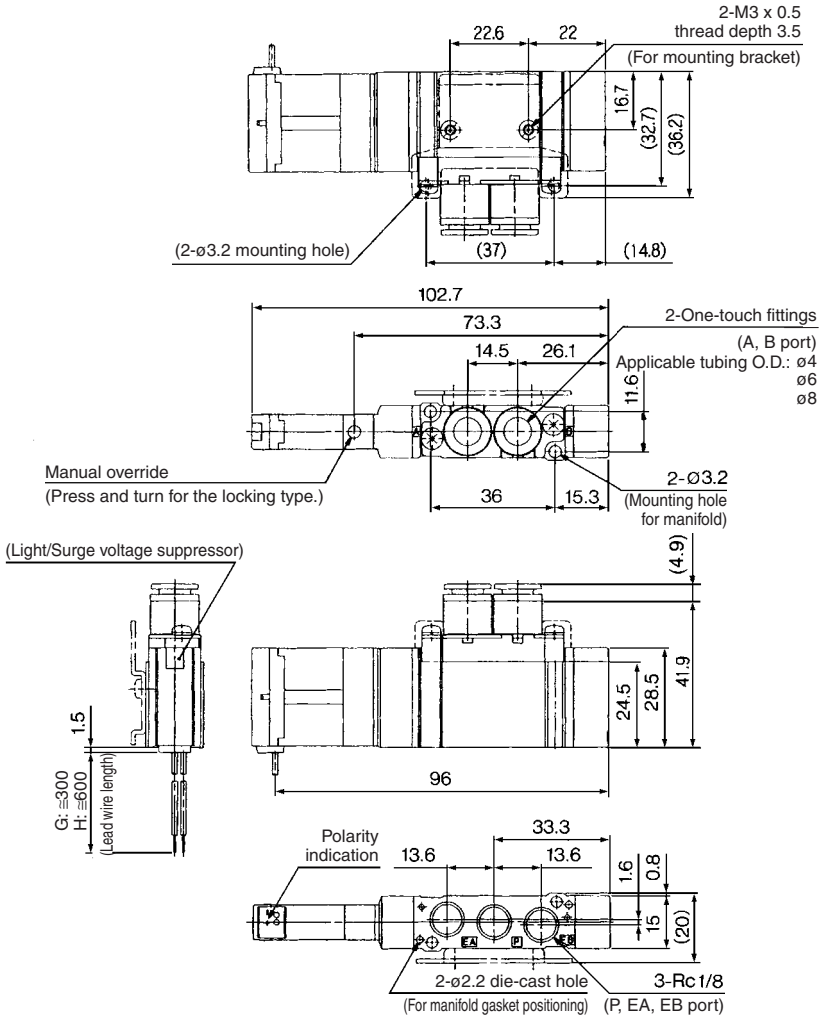
Inch size

SX3000	One-touch fitting for ø5/32"	VVQ1000-50A-N3
	One-touch fitting for ø1/4"	VVQ1000-50A-N7
SX5000	One-touch fitting for ø5/32"	VVQ1000-51A-N3
	One-touch fitting for ø1/4"	VVQ1000-50A-N7
	One-touch fitting for ø5/16"	VVQ1000-50A-N9
SX7000	One-touch fitting for ø5/16"	VVQ2000-51A-N9
	One-touch fitting for ø3/8"	VVQ2000-51A-N11

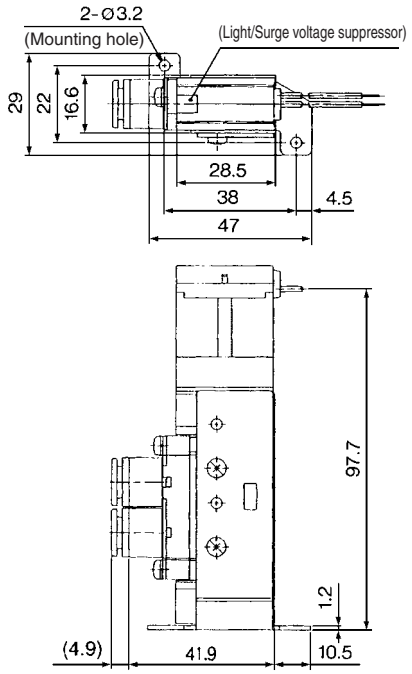


Dimensions: Series SX5000

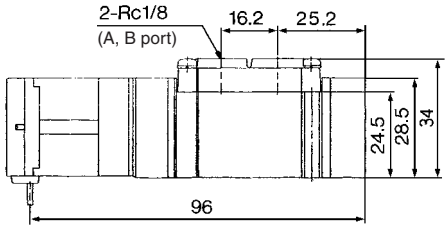
2 position single
Grommet (G), (H): SX5120-□$^{G}_{H}$□□-$^{C4}_{C6}$$_{C8}$(-F2)



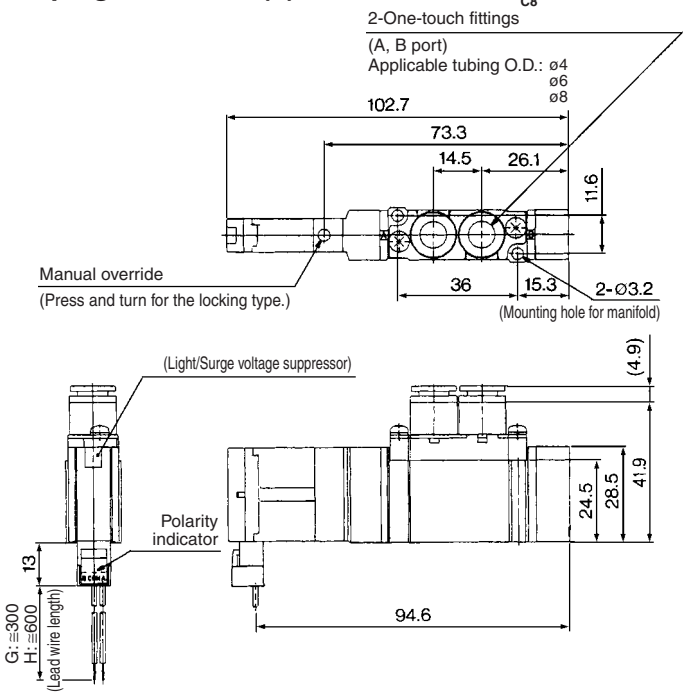
Foot bracket
SX5120-□$^{G}_{H}$□□-$^{C4}_{C6}$$_{C8}$-F1



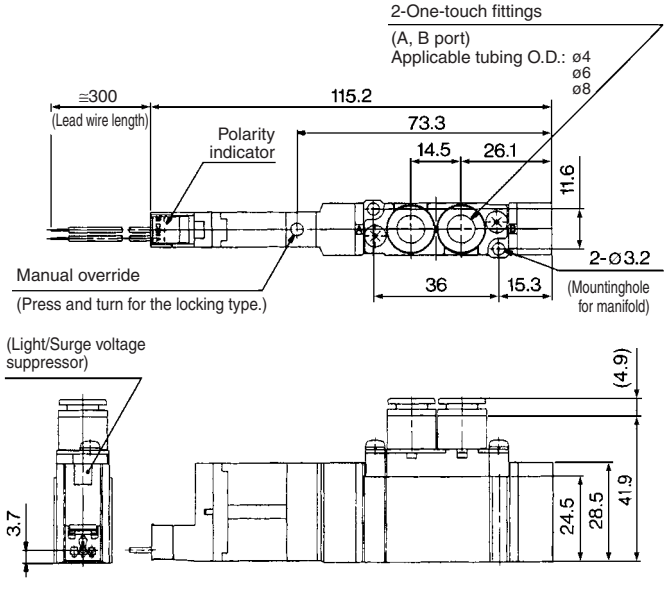
SX5120-□$^{G}_{H}$□□-01



L plug connector (L): SX5120-□L□□-$^{C4}_{C6}$$_{C8}$

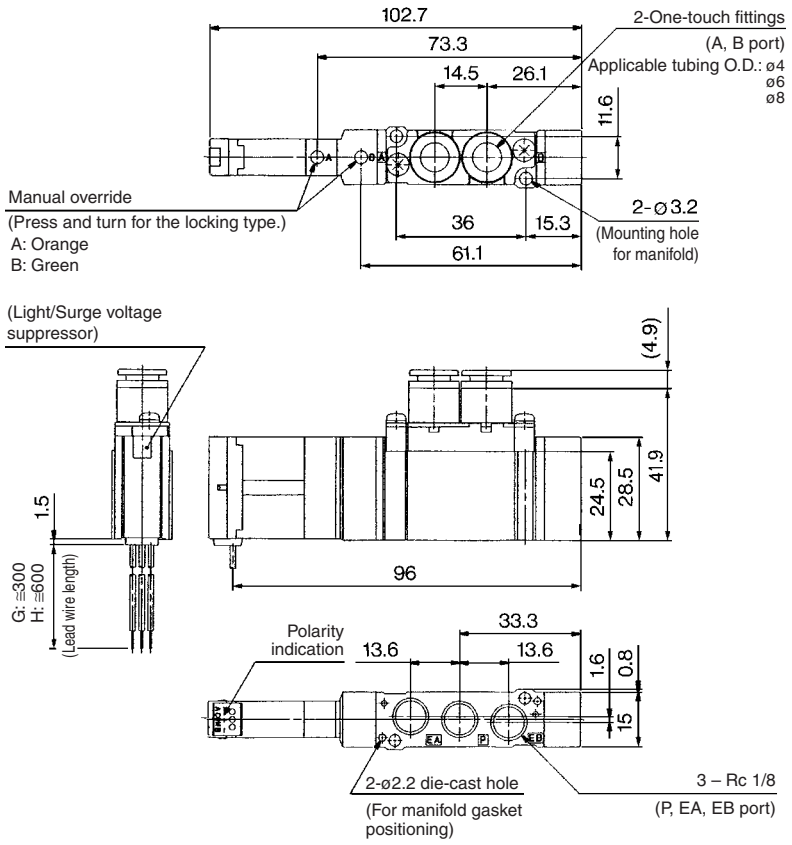


M plug connector (M): SX5120-□M□□-$^{C4}_{C6}$$_{C8}$

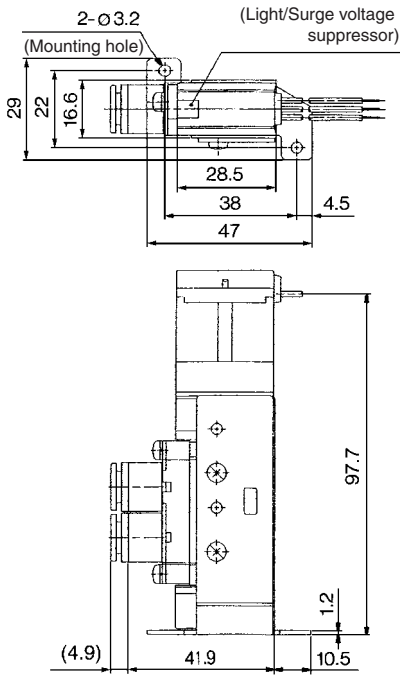


Dimensions: Series SX5000

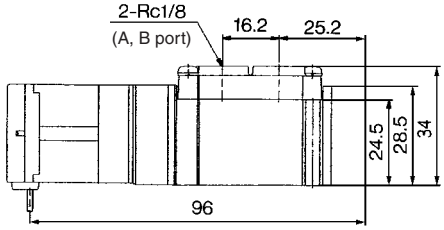
2 position double
Grommet (G), (H): SX5220-□$^{G}_{H}$□□-$^{C4}_{C6}$$_{C8}$



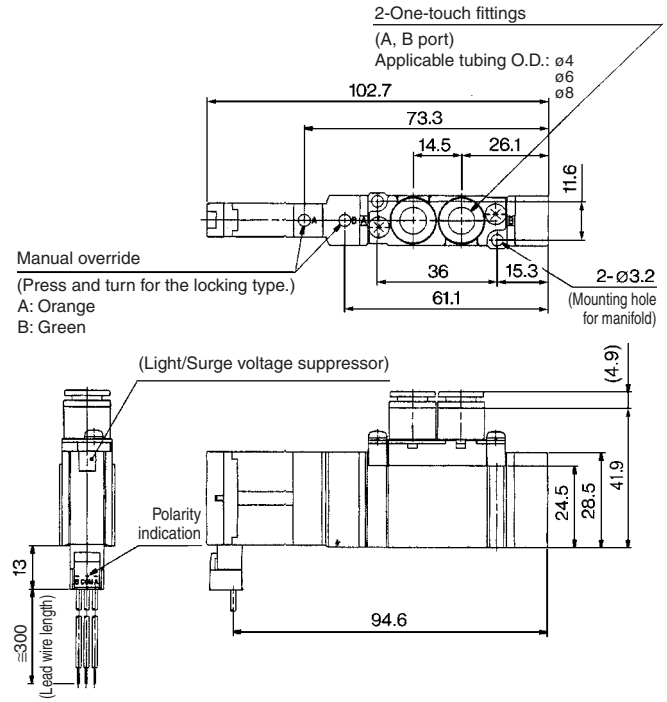
Foot bracket
SX5220-□$^{G}_{H}$□□-$^{C4}_{C6}$$_{C8}$-F1



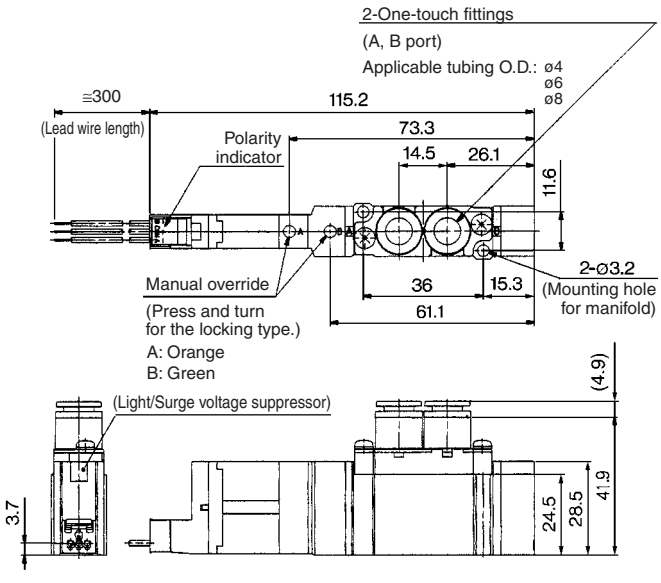
SX5220-□$^{G}_{H}$□□-01



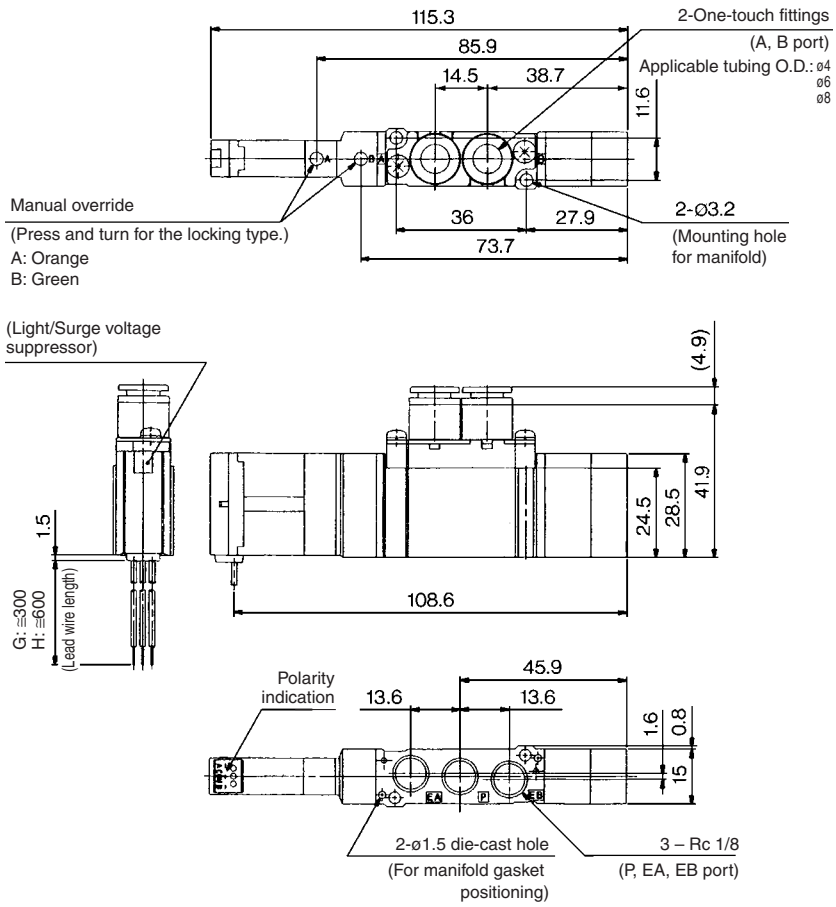
L plug connector (L): SX5220-□L□□-$^{C4}_{C6}$$_{C8}$



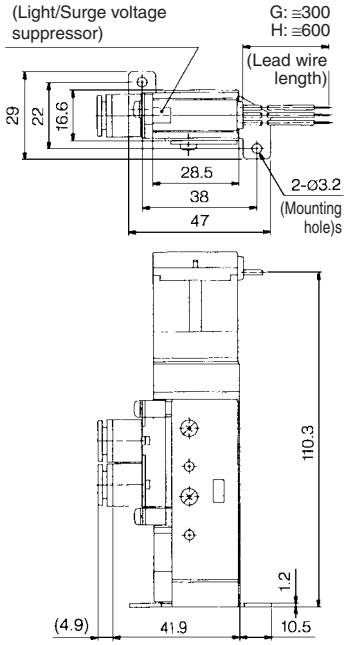
M plug connector (M): SX5220-□M□□-$^{C4}_{C6}$$_{C8}$



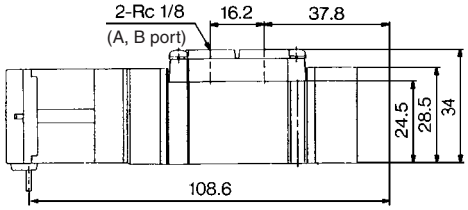
3 position closed center/exhaust center/pressure center Grommet (G), (H): SX5$^{3}_{4}_{5}$20-□$^{G}_{H}$□□-$^{C4}_{C6}_{C8}$



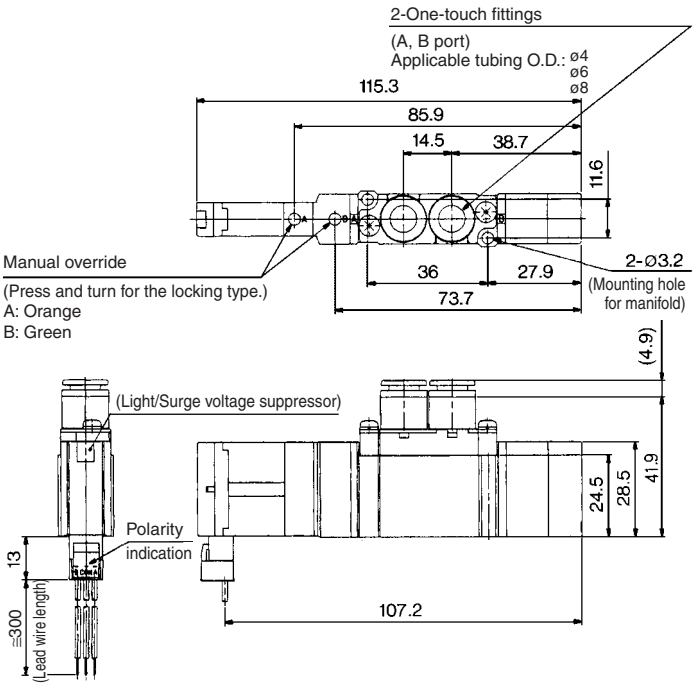
Foot bracket SX5$^{3}_{4}_{5}$20-□$^{G}_{H}$□□-$^{C4}_{C6}_{C8}$-F1



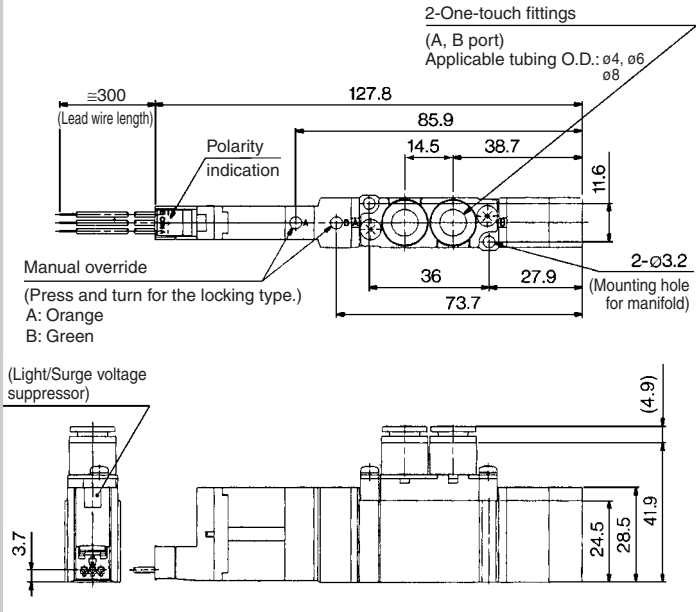
SX5$^{3}_{4}_{5}$20-□$^{G}_{H}$□□-01



L plug connector (L): SX5$^{3}_{4}_{5}$20-□L□□-$^{C4}_{C6}_{C8}$



M plug connector (M): SX5$^{3}_{4}_{5}$20-□M□□-$^{C4}_{C6}_{C8}$



Series SX3000/5000/7000
Base Mounted
Valve Single Unit

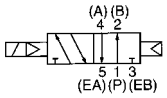
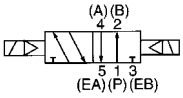
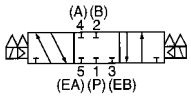
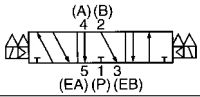
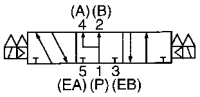
How to Order

SX [5] [2] 40 [ ] — [5] [N] [L] [ ] [ ] — [ ] [ ]

Series

3	SX3000
5	SX5000
7	SX7000

Type of actuation

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

Thread type

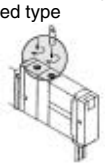
Nil	Rc
F	G
N	NPT
T	NPTF

Port size

Symbol	Port size	Applicable series
Nil	Without sub-plate	
01	1/8 With sub-plate	SX3000
02	1/4 With sub-plate	SX5000 SX7000
03	3/8 With sub-plate	SX7000

Manual override

Nil: Non-locking push type 

D: Push-turn locking slotted type 

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

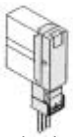
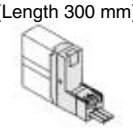
Pilot type

Nil	Internal pilot
R	External pilot

Rated voltage

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

Electrical entry

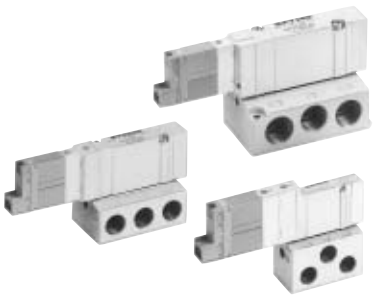
Grommet	L plug connector	M plug connector	
G: Lead wire length 300 mm 	**L:** With lead wire (Length 300 mm) 	**M:** With lead wire (Length 300 mm) 	**MN:** Without lead wire 
H: Lead wire length 600 mm 	**LN:** Without lead wire 	**LO:** Without connector 	**MO:** Without connector 

∗ The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.



Made to Order **Made to Order Specifications (For details, refer to pages 1-6-124 to 1-6-138.)**

Specifications

Series			SX3000	SX5000	SX7000
Fluid			Air		
Internal pilot Operating pressure range (MPa)	2 position single		0.15 to 0.7		
	2 position double		0.1 to 0.7		
	3 position		0.2 to 0.7		
External pilot Operating pressure range (MPa)	Operating pressure range		–100 kPa to 0.7		
	Pilot pressure range	2 position single	0.25 to 0.7		
		2 position double	0.25 to 0.7		
		3 position	0.25 to 0.7		
Ambient and fluid temperature (°C)			Max. 50		
Max. operating frequency (Hz)	2 position single, double		10	5	5
	3 position		3	3	3
Manual override			Non-locking push type, Push-turn locking slotted type		
Pilot exhaust method	Internal pilot		Common exhaust type for main and pilot valve		
	External pilot		Pilot valve individual exhaust		
Lubrication			Not required		
Mounting orientation			Unrestricted		
Impact/Vibration resistance (m/s^2)Note)			150/30		
Enclosure			Dusttight		

Note) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)
Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

Solenoid Specifications

Electrical entry		Grommet (G)/(H), L plug connector (L), M plug connector (M)
Coil rated voltage (V)	DC	24, 12, 6, 5, 3
Allowable voltage fluctuation		±10% of rated voltage
Power consumption (W)	DC	0.6 (With indicator light: 0.65)
Surge voltage suppressor		Diode
Indicator light		LED

Response Time

Note) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage)

SX3000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)	
	Without light/surge voltage suppressor	With light/surge voltage suppressor S, Z type
2 position single	12 or less	15 or less
2 position double	10 or less	13 or less
3 position	15 or less	20 or less

SX5000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)	
	Without light/surge voltage suppressor	With light/surge voltage suppressor S, Z type
2 position single	19 or less	26 or less
2 position double	18 or less	22 or less
3 position	32 or less	38 or less

SX7000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)	
	Without light/surge voltage suppressor	With light/surge voltage suppressor S, Z type
2 position single	31 or less	38 or less
2 position double	27 or less	30 or less
3 position	50 or less	56 or less

Flow Characteristics/Weight

Model/Series SX3000

Valve model	Type of actuation		Port size	Flow characteristics (1)						Weight (g) (2)	
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)				
				C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	Grommet	L plug connector M plug connector
SX3□40-□-01	2 position	Single	Rc 1/8	1.0	0.30	0.24	1.1	0.30	0.26	100 (66)	101 (67)
		Double								108 (74)	110 (75)
	3 position	Closed center		0.77	0.28	0.18	0.85	0.30	0.19	111 (76)	112 (78)
		Exhaust center		0.73	0.31	0.18	1.1 [0.55]	0.26 [0.52]	0.24 [0.16]		
		Pressure center		1.2 [0.51]	0.24 [0.45]	0.29 [0.14]	0.89	0.47	0.24		

Note 1) [ ]: Denotes the normal position.
Note 2) ( ): Without sub-plate.

Model/Series SX5000

Valve model	Type of actuation		Port size	Flow characteristics (1)						Weight (g) (2)	
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)				
				C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	Grommet	L plug connector M plug connector
SX5□40-□-02	2 position	Single	Rc 1/4	2.4	0.41	0.64	2.8	0.29	0.66	136 (74)	137 (75)
		Double								144 (82)	145 (83)
	3 position	Closed center		1.8	0.47	0.50	1.8	0.40	0.47	149 (87)	151 (89)
		Exhaust center		1.4	0.55	0.44	3.0 [1.2]	0.33 [0.48]	0.72 [0.37]		
		Pressure center		3.3 [0.84]	0.36 [0.60]	0.85 [0.28]	1.8	0.40	0.48		

Note 1) [ ]: Denotes the normal position.
Note 2) ( ): Without sub-plate.

Model/Series SX7000

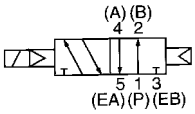
Valve model	Type of actuation		Port size	Flow characteristics (1)						Weight (g) (2)	
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)				
				C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	Grommet	L plug connector M plug connector
SX7□40-□-02	2 position	Single	Rc 1/4	4.1	0.41	1.1	4.1	0.29	1.0	222 (100)	223 (101)
		Double								229 (107)	231 (109)
	3 position	Closed center		3.0	0.43	0.80	2.6	0.41	0.72	238 (116)	240 (118)
		Exhaust center		2.6	0.42	0.71	4.7 [1.7]	0.35 [0.48]	1.1 [0.49]		
		Pressure center		5.3 [2.3]	0.39 [0.49]	1.3 [0.65]	2.2	0.49	0.63		
SX7□40-□-03	2 position	Single	Rc 3/8	4.9	0.29	1.2	4.5	0.27	1.1	222 (100)	223 (101)
		Double								229 (107)	231 (109)
	3 position	Closed center		3.0	0.40	0.80	2.6	0.45	0.73	238 (116)	240 (118)
		Exhaust center		2.6	0.42	0.71	4.8 [1.7]	0.35 [0.48]	1.1 [0.49]		
		Pressure center		5.3 [2.3]	0.31 [0.51]	1.3 [0.64]	2.3	0.45	0.66		

Note 1) [ ]: Denotes the normal position.
Note 2) ( ): Without sub-plate.

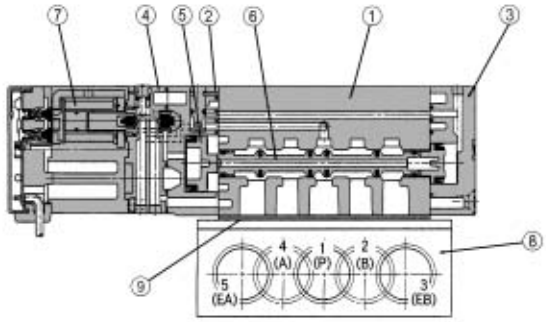
Construction

Series SX

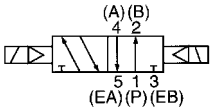
JIS Symbol
2 position single



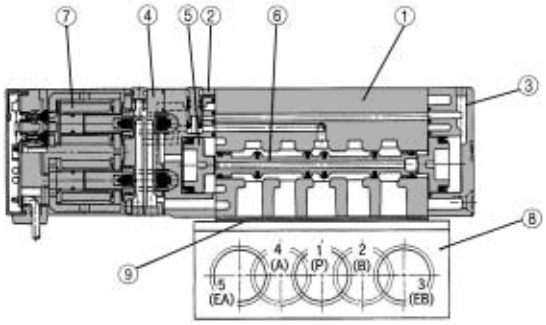
2 position single



JIS Symbol
2 position double

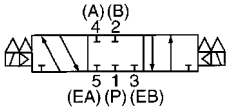


2 position double

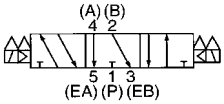


3 position closed center/exhaust center/pressure center

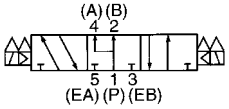
JIS Symbol
3 position closed center

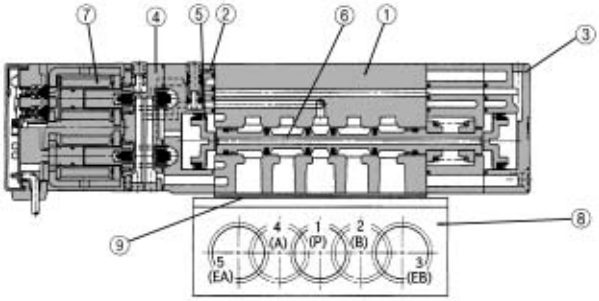


3 position exhaust center



3 position pressure center





(This figure shows a closed center type.)

Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted (SX3000: Zinc die-casted)	White
②	Adapter plate	Resin	White
③	End plate	Resin	White
④	Pilot body	Resin	White
⑤	Piston	Resin	—
⑥	Spool valve assembly	Aluminum, HNBR	—
⑦	Molded coil	Resin	Gray

Replacement Parts

No.	Description	Part no.			Note
		SX3□40	SX5□40	SX7□40	
⑧	Sub-plate	SY3000-27-1	SY5000-27-1	1/4 Rc: SY7000-27-1 3/8 Rc: SY7000-27-2	Aluminum die-casted
⑨	Gasket	SY3000-11-25	SY5000-11-15	SY7000-11-11	HNBR
—	Round head combination screw	SX3000-22-2 (M2 x 24)	M3 x 30	M4 x 35	For valve mounting (Matt nickel plated)

How to Order Connector Assembly for L/M Plug Connector

Positive common specifications

For single solenoid: **SX100-40-4S-**

For double solenoid, 3 position: **SX100-40-4D-**

Negative common specifications

For single solenoid: **SX100-41-4S-**

For double solenoid, 3 position: **SX100-41-4D-**

Lead wire length

Nil	300 mm
6	600 mm
10	1000 mm
15	1500 mm
20	2000 mm
25	2500 mm
30	3000 mm
50	5000 mm

For detailed information on connector assembly, refer to page 1-6-8.

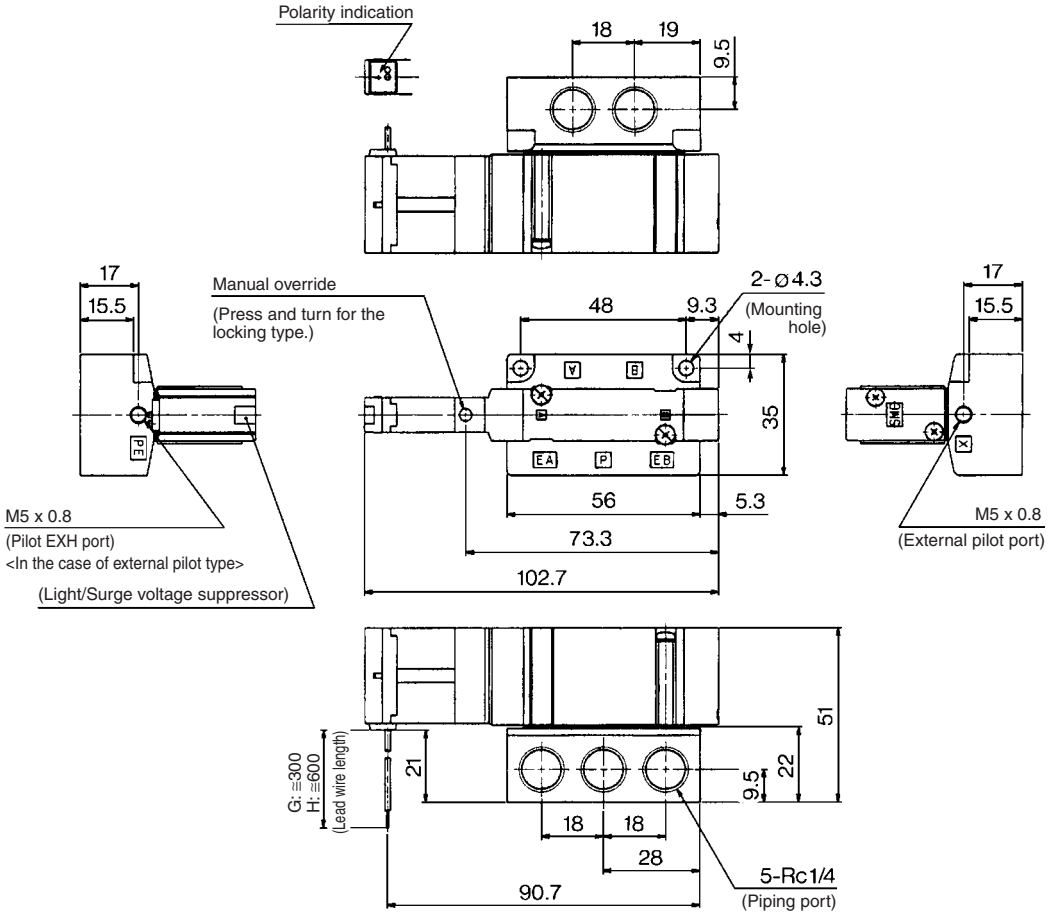
⚠ Caution

Mounting Screw Tightening Torques

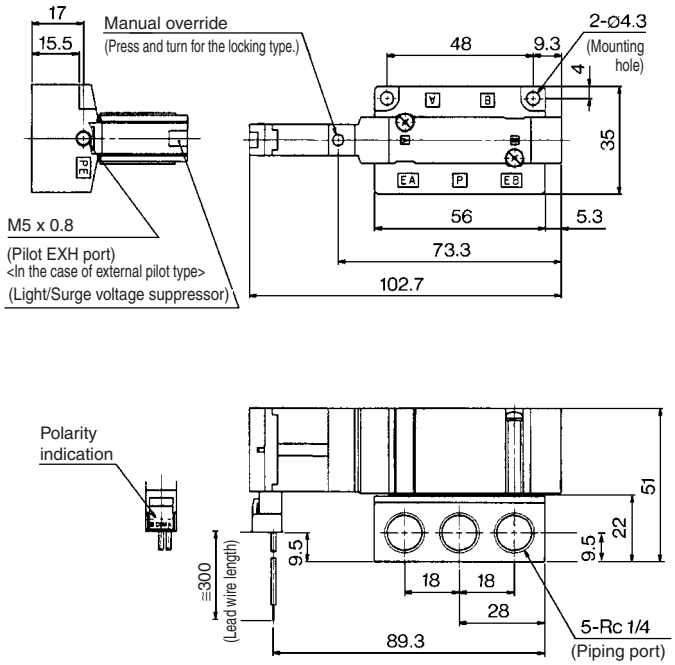
M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

Dimensions: Series SX5000

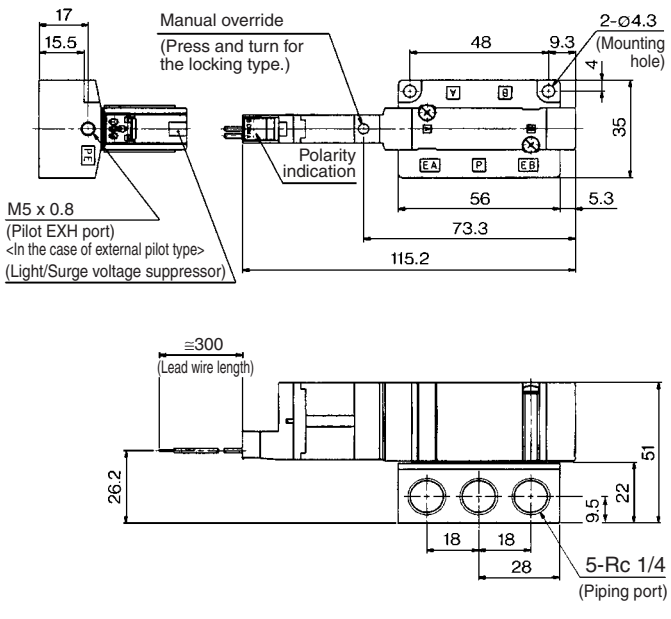
2 position single
Grommet (G), (H): SX5140(R)-□G/H□□-02



L plug connector (L): SX5140(R)-□L□□-02

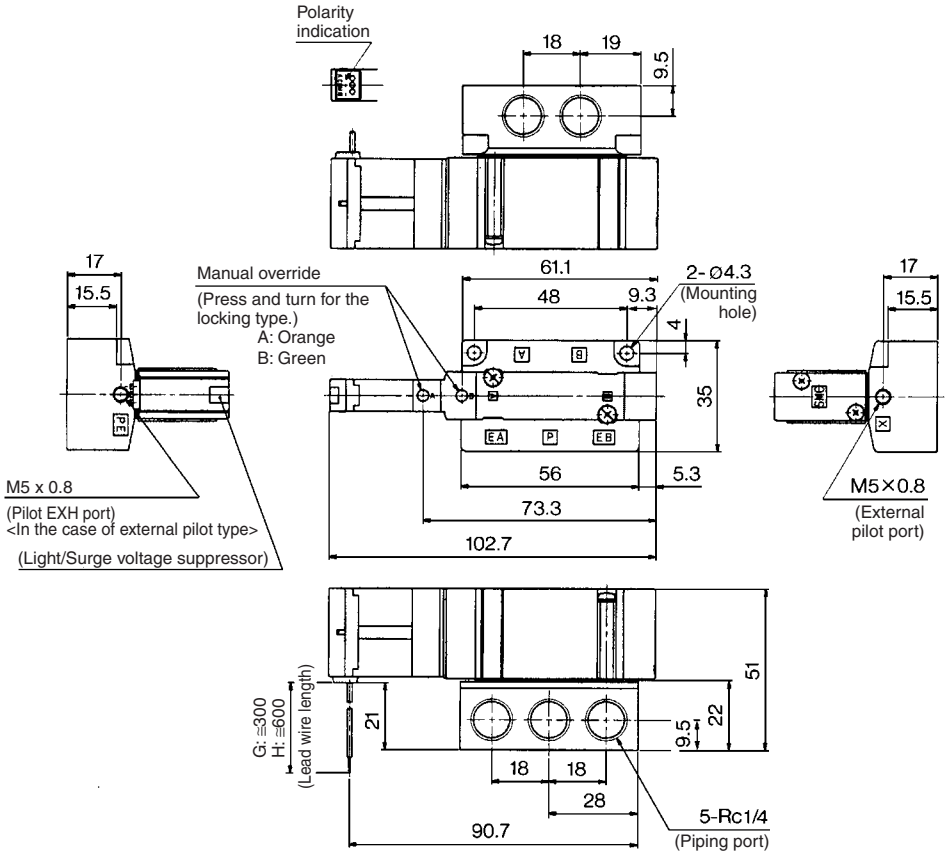


M plug connector (M): SX5140(R)-□M□□-02

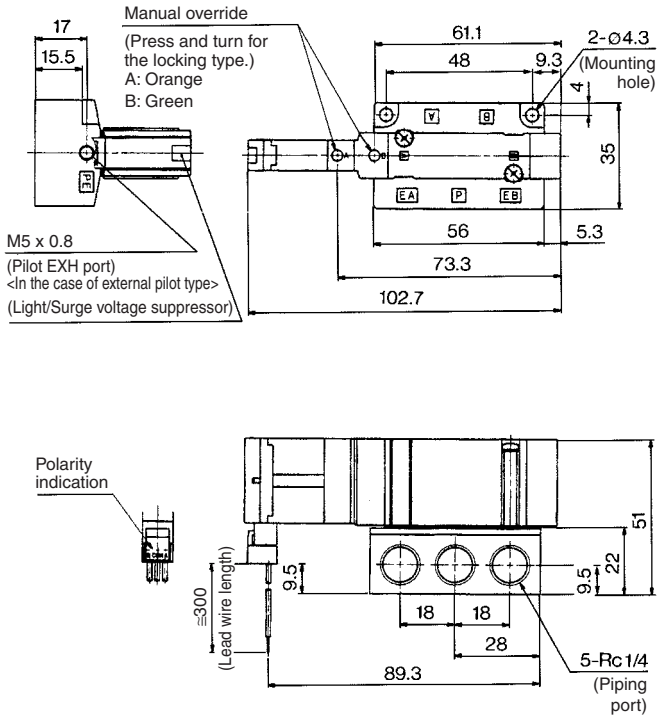


Dimensions: Series SX5000

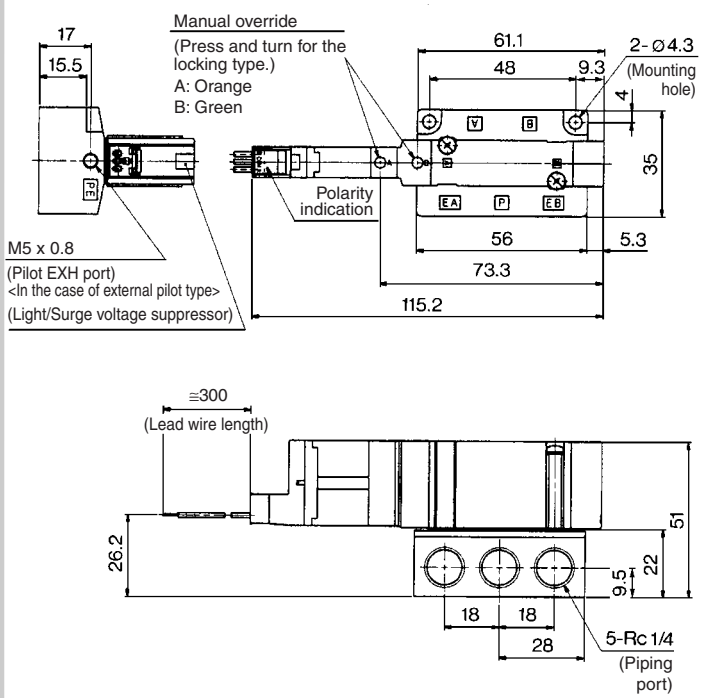
2 position double
Grommet (G), (H): SX5240(R)-□$^{G}_{H}$□□-02



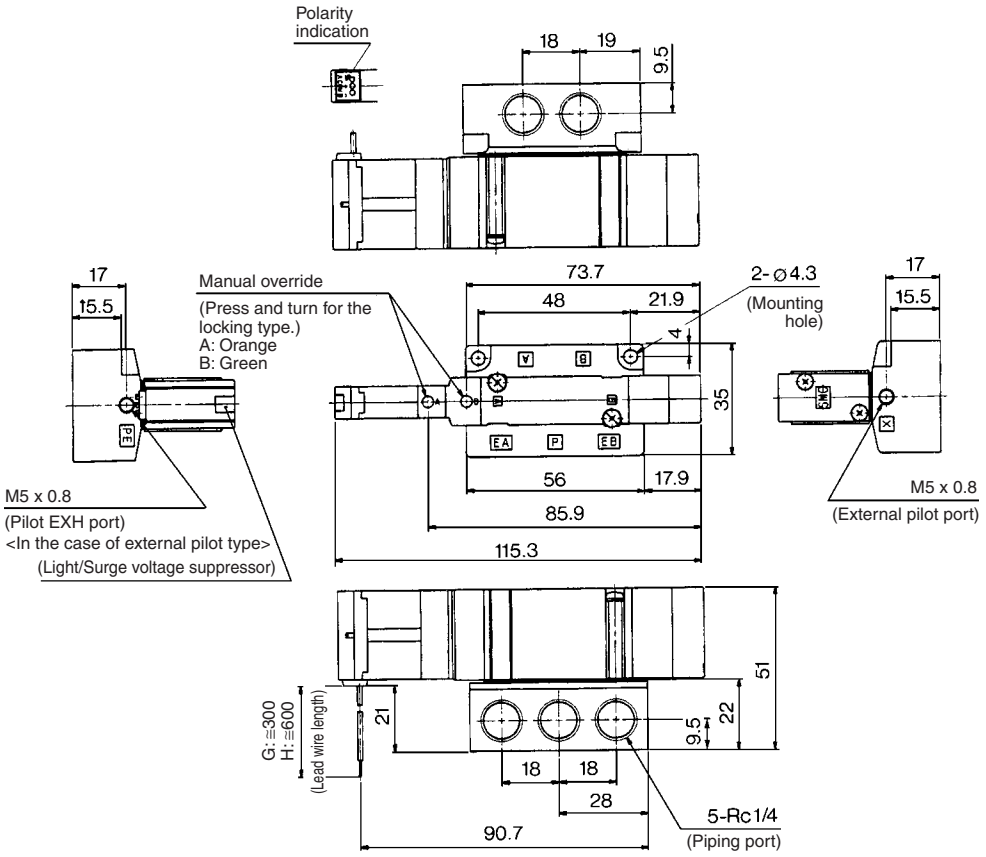
L plug connector (L): SX5240(R)-□L□□-02



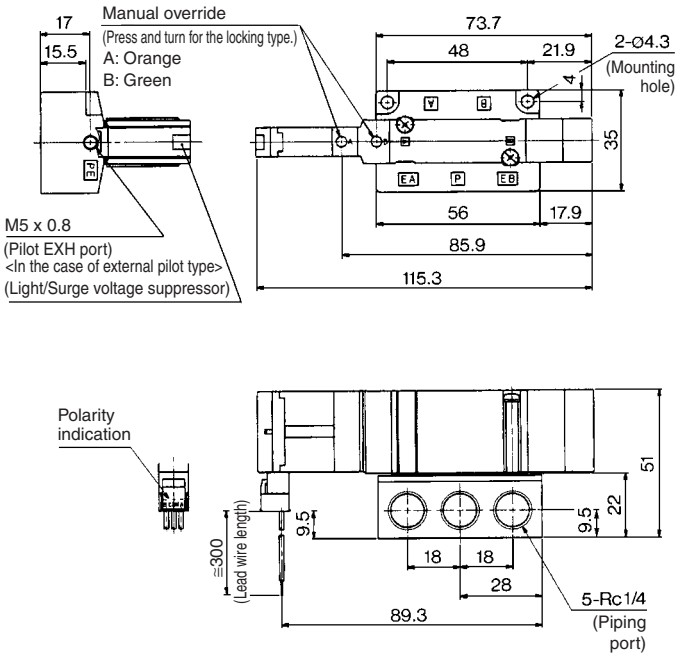
M plug connector (M): SX5240(R)-□M□□-02



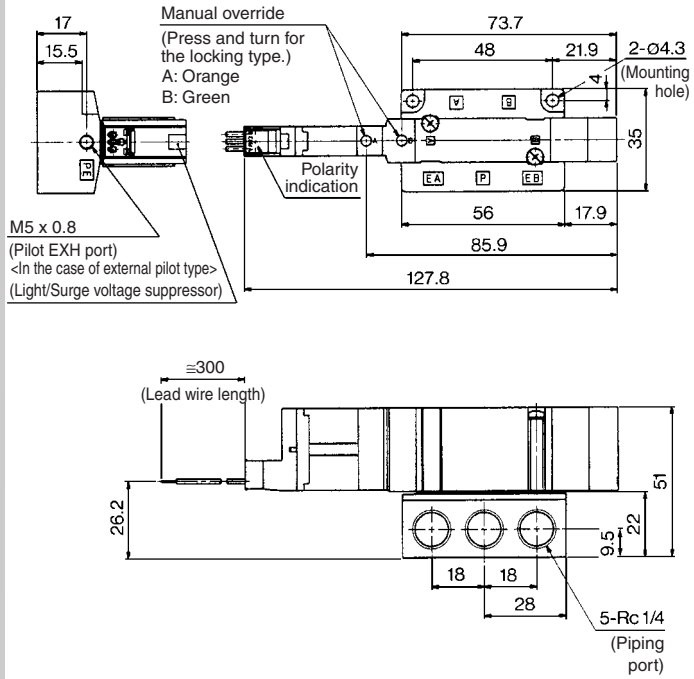
3 position closed center/exhaust center/pressure center
Grommet (G), (H): SX5$^{3}_{4}_{5}$40(R)-□$^{G}_{H}$□□-02



L plug connector (L): SX5$^{3}_{4}_{5}$40(R)-□L □□02



M plug connector (M): SX5$^{3}_{4}_{5}$40(R)-□M□□-02



Type 20

Series SX3000/5000/7000
Body Ported Manifold
Bar Stock Type
Individual Wiring

How to Order Manifold

SS5X 5 — 20 — 05 □

Series

3	SX3000
5	SX5000
7	SX7000

Stations

02	2 stations
⋮	⋮
20	20 stations

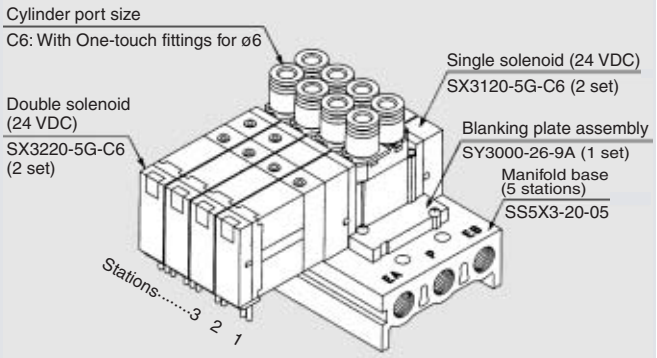
P, R ports Thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

• Connector assembly for L and M types····· Refer to page 1-6-8.
• Common connector assembly for manifold····· Refer to page 1-6-9.

How to Order Valve Manifold Assembly

Ordering example



SS5X3-20-05····· 1 set (Type 20, 5-station manifold base part no.)
∗SY3000-26-9A····· 1 set (Blanking plate assembly part no.)
∗SX3120-5G-C6····· 2 sets (Single solenoid part no.)
∗SX3220-5G-C6····· 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 number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

How to Order Valves

SX 5 1 20 — 5 N L □ □ — 01 □

Series

3	SX3000
5	SX5000
7	SX7000

Type of actuation

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

Rated voltage

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

A, B port size

Symbol	Port size	Applicable series
M5	M5 x 0.8	SX3000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
01	1/8	SX5000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
02	1/4	SX7000
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Manual override

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

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.

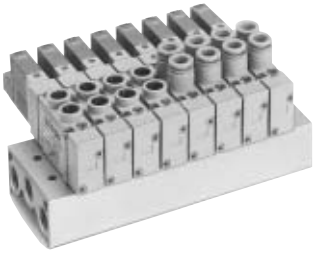
Electrical entry

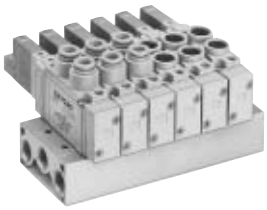
Grommet	L plug connector	M plug connector
G: Lead wire length 300 mm **H:** Lead wire length 600 mm	**L:** With lead wire (Length 300 mm) **LN:** Without lead wire **LO:** Without connector	**M:** With lead wire (Length 300 mm) **MN:** Without lead wire **MO:** Without connector

∗ The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor





Manifold Specifications

Model		SS5X3-20	SS5X5-20	SS5X7-20
Applicable valve		SX3□20	SX5□20	SX7□20
Manifold type		Single base/B mount		
P (SUP)/R (EXH)		Common SUP/Common EXH		
Valve stations Note)		2 to 20 stations		
A, B port location		Valve		
Port size	P, EA, EB port	Rc 1/8	Rc 1/4	Rc 1/4
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	Rc 1/8 C4 (One-touch fitting ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	Rc 1/4 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Stations		W = 19n + 45	W = 43n + 77	W = 51n + 81

Note) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA and EB port on both sides.

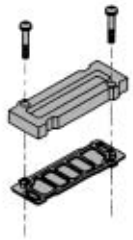
Flow Characteristics

Model	Port size		Flow characteristics					
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5X3-20	Rc 1/8	C6	0.72	0.29	0.18	0.80	0.36	0.21
SS5X5-20	Rc 1/4	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5X7-20	Rc 1/4	C10	3.6	0.31	0.93	3.6	0.27	0.88

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

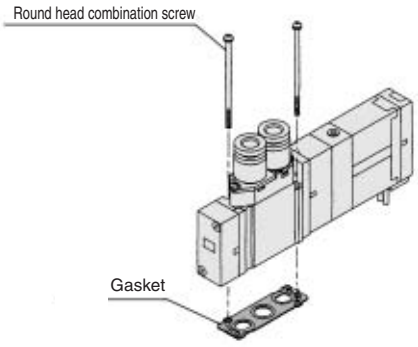
Manifold Option

■ Blanking plate assembly



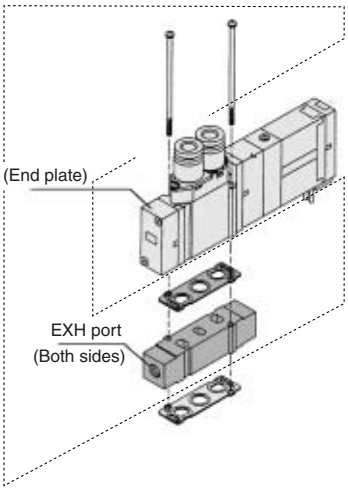
Series	Assembly part no.
SX3000	SY3000-26-9A
SX5000	SY5000-26-20A
SX7000	SY7000-26-22A

■ Bolt and gasket part no.



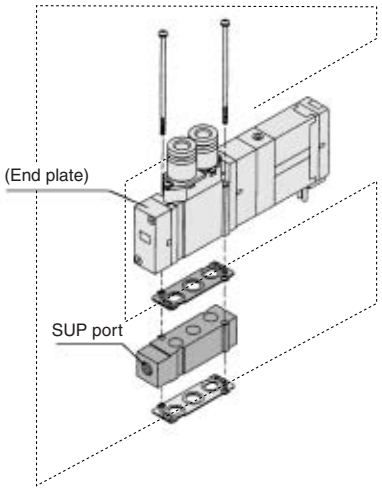
Series	Round head combination screw	Gasket
SX3000	SX3000-22-2 (M2 x 24)	SY3000-11-24
SX5000	M3 x 30 (Matt nickel plated)	SY5000-11-10
SX7000	M4 x 35 (Matt nickel plated)	SY7000-11-9

■ Individual EXH spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-39-1□A	M5 x 0.8
SX5000	SX5000-39-1□A	1/8
SX7000	SX7000-39-20A	1/4

■ Individual SUP spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-38-1□A	M5 x 0.8
SX5000	SX5000-38-1□A	Rc 1/8
SX7000	SX7000-38-20A	Rc 1/4

Note) The SUP port may be either on the lead wire side or on the end plate side. (Factory assembled spacer will be shipped with the orientation shown in the figure.)

∗ Thread type

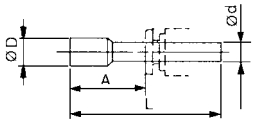
Nil	Rc
F	G
N	NPT
T	NPTF

■ Plug

Inserted into an unused cylinder port and SUP/EXH ports. Purchasing order is available in units of 10 pieces.

Dimensions

Applicable fitting ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10
3/8"	KQ2P-11	22	43	11.5



⚠ Caution

Mounting Screw Tightening Torques

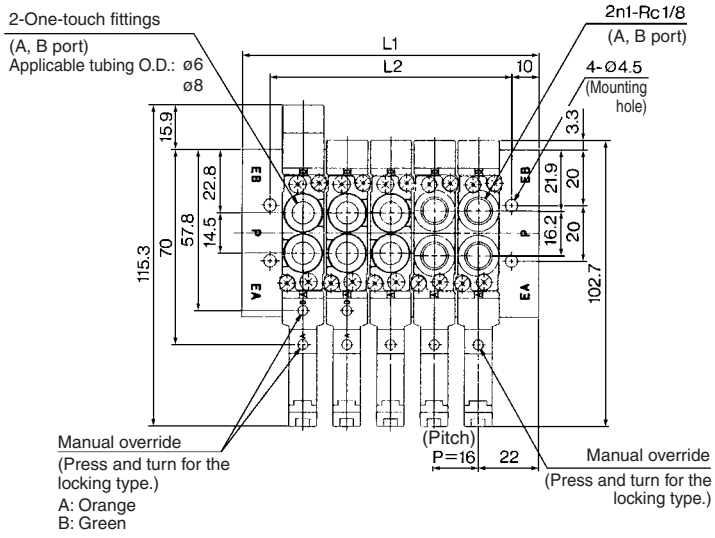
M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

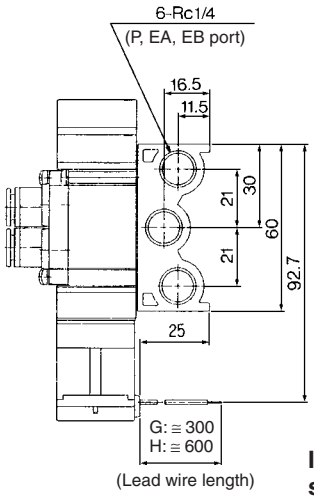
⚠ Warning

When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions in pages 1-6-44 to 1-6-46, and then mount it.

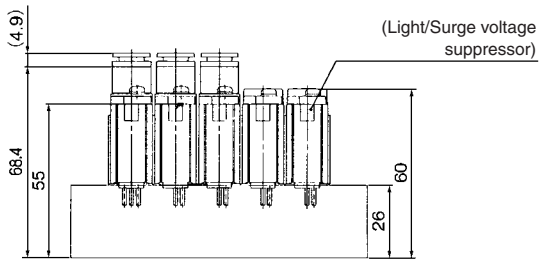
SX5000: SS5X5-20- Stations

Grommet (G)

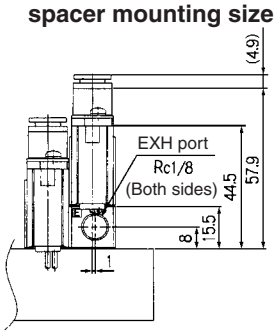




(n) ····· (2) (1) stations

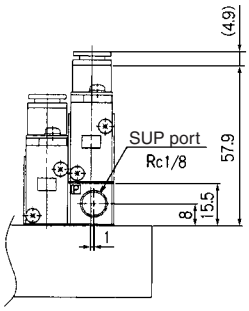


Individual EXH spacer mounting size

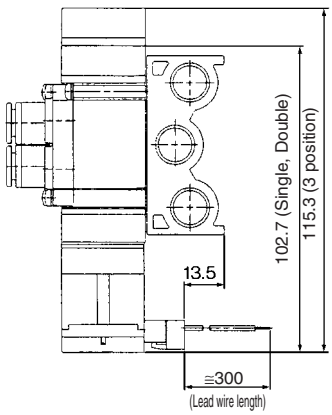


Individual SUP spacer mounting size

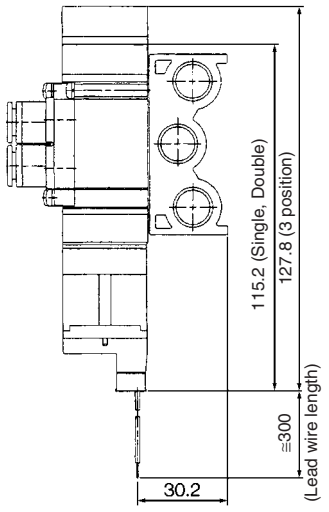
(SUP port is mounted on the end plate side of single solenoid.)



L plug connector (L)



M plug connector (M)



n: Stations (n1 + n2)

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	60	76	92	108	124	140	156	172	188	204	220	236	252	268	284	300	316	332	348
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

Type 20P/N

Series SX3000/5000/7000
Body Ported Manifold
Bar Stock Type
Flat Ribbon Cable

How to Order Manifold

SS5X 5 — 20 P — 05 □

Series

3	SX3000
5	SX5000
7	SX7000

Stations

03	3 stations
⋮	⋮
12	12 stations

Note) For SS5X3: 4 to 12 stations.

P, R ports Thread type

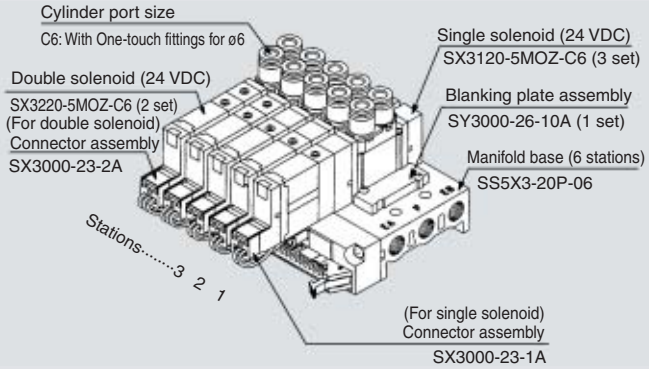
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Common specifications

P	Positive common
N	Negative common

How to Order Valve Manifold Assembly

Ordering example



SS5X3-20P-06····· 1 set (Type 20P, 6-station manifold no.)
∗SY3000-26-10A····· 1 set (Blanking plate assembly part no.)
∗SX3120-5MOZ-C6··· 3 sets (Single solenoid part no.)
∗SX3220-5MOZ-C6··· 2 sets (Double solenoid part no.)
∗SX3000-23-1A····· 3 sets (Connector assembly no.)
∗SX3000-23-2A····· 2 sets (Connector assembly 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 number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

How to Order Valves

SX 5 1 20 — 5 N MOZ □ — 01 □

Series

3	SX3000
5	SX5000
7	SX7000

Type of actuation

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

Rated voltage

5	24 VDC
6	12 VDC

Common specifications

Nil	Positive common
N	Negative common

∗ Common specifications for the valve must correspond with common specifications for the manifold.

Manual override

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

A/B port size
Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SX3000
01	1/8	SX5000
02	1/4	SX7000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
C8	One-touch fitting for ø8	SX7000
C10	One-touch fitting for ø10	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
N9	One-touch fitting for ø5/16"	SX7000
N11	One-touch fitting for ø3/8"	

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

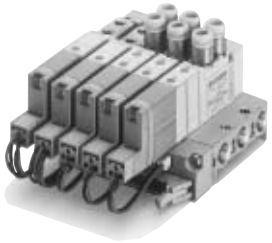
How to Order Connector Assembly

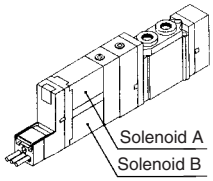
- Positive common specifications
  For single solenoid: SX3000-23-1A
  For double solenoid, 3 position: SX3000-23-2A
- Negative common specifications
  For single solenoid: SX3000-24-1A
  For double solenoid, 3 position: SX3000-24-2A

For detailed information on connector assembly, refer to page 1-6-9.

- **Multiple valve wiring is simplified through the use of the flat cable connector.**
- **Clean appearance**

In the case of a flat cable style, 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.





Manifold Specifications

Model		SS5X3-20P/N	SS5X5-20P/N	SS5X7-20P/N
Applicable valve		SX3□20	SX5□20	SX7□20
Manifold type		Single base/B mount		
P (SUP), R (EXH)		Common SUP/Common EXH		
Valve stations Note (1)		4 to 12 stations	3 to 12 stations	
A, B port location		Valve		
Port size	P, EA, EB port	1/8	1/4	1/4
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	1/8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	1/4 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Stations		W = 19n + 45	W = 43n + 77	W = 51n + 81
Applicable flat ribbon cable connector		Socket: 26 pins MIL with strain relief (Conforming to MIL-C-83503)		
Internal wiring (2)		+COM (Type 20P), –COM (Type 20N)		
Rated voltage		12, 24 VDC		

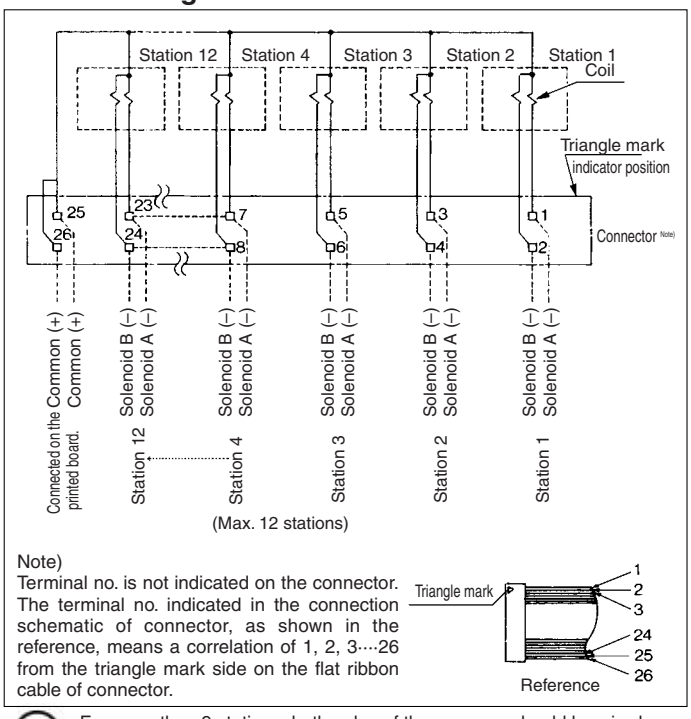
Note 1) For more than 10 stations (more than 5 stations in case of SS5X7), supply pressure to P port on both sides and exhaust from EA and EB port on both sides.
Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.

Flow Characteristics

Model	Port size		Flow characteristics					
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5X3-20P/N	Rc 1/8	C6	0.72	0.29	0.18	0.80	0.36	0.21
SS5X5-20P/N	Rc 1/4	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5X7-20P/N	Rc 1/4	C10	3.6	0.31	0.93	3.6	0.27	0.88

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Internal Wiring of Manifold

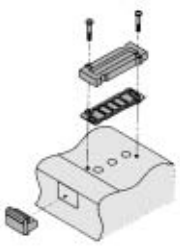


Note)
Terminal no. is not indicated on the connector. The terminal no. indicated in the connection schematic of connector, as shown in the reference, means a correlation of 1, 2, 3····26 from the triangle mark side on the flat ribbon cable of connector.

- For more than 9 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations is 12. If more than 12 stations are required, please consult with SMC.
- –COM and +COM specifications are available. (Diagram above is for +COM specifications.)

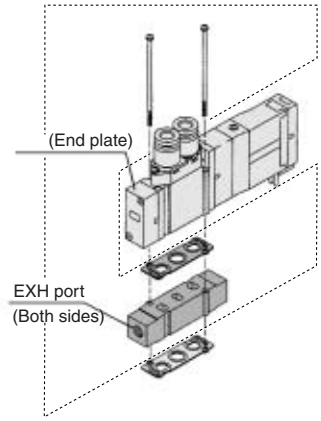
Manifold Option

■ Blanking plate assembly



Series	Assembly part no.
SX3000	SY3000-26-10A
SX5000	SY5000-26-21A
SX7000	SY7000-26-23A

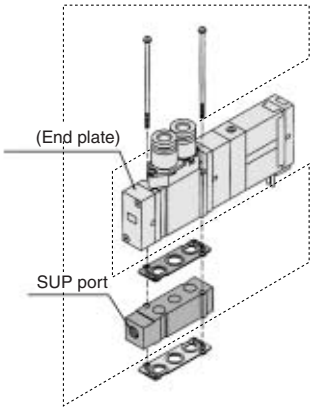
■ Individual EXH spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-39-20A	M5 x 0.8
SX5000	SX5000-39-1⊠A	1/8
SX7000	SX7000-39-1⊠A	1/4

Note) For protection of the wiring unit section from drain, it should be piped at the EA port so that it will not be directly exposed to exhaust from the valve.

■ Individual SUP spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-38-20A	M5 x 0.8
SX5000	SX5000-38-1⊠A	1/8
SX7000	SX7000-38-1⊠A	1/4

Note) The SUP port may be either on the lead wire side or on the end plate side (Factory assembled spacer will be shipped with the orientation shown in the figure.)

⚠ Caution

Mounting screw tightening torques

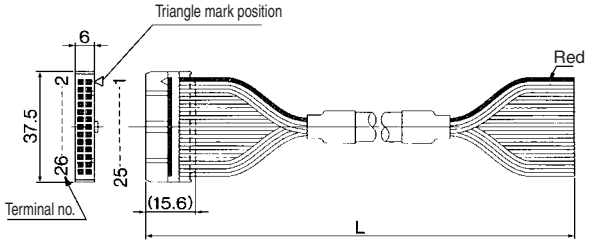
M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

∗ Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

■ Cable assembly

AXT100-FC26- 1 to 3



Connector Assembly for Flat Ribbon Cable

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-FC26-1	Cable 26 cores x 28AWG
3 m	AXT100-FC26-2	
5 m	AXT100-FC26-3	

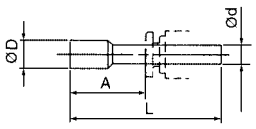
∗ For other commercial connectors, use a 26 pins type with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

- **Hirose Electric Co., Ltd.**
- **Japan Aviation Electronics Industry, Ltd.**
- **Sumitomo 3M Limited**
- **J.S.T. Mfg. Co., Ltd.**
- **Fujitsu Limited**

■ Plug

These are inserted in cylinder ports or SUP/EXH ports which are not being used.
Purchasing order is available in units of 10 pieces.



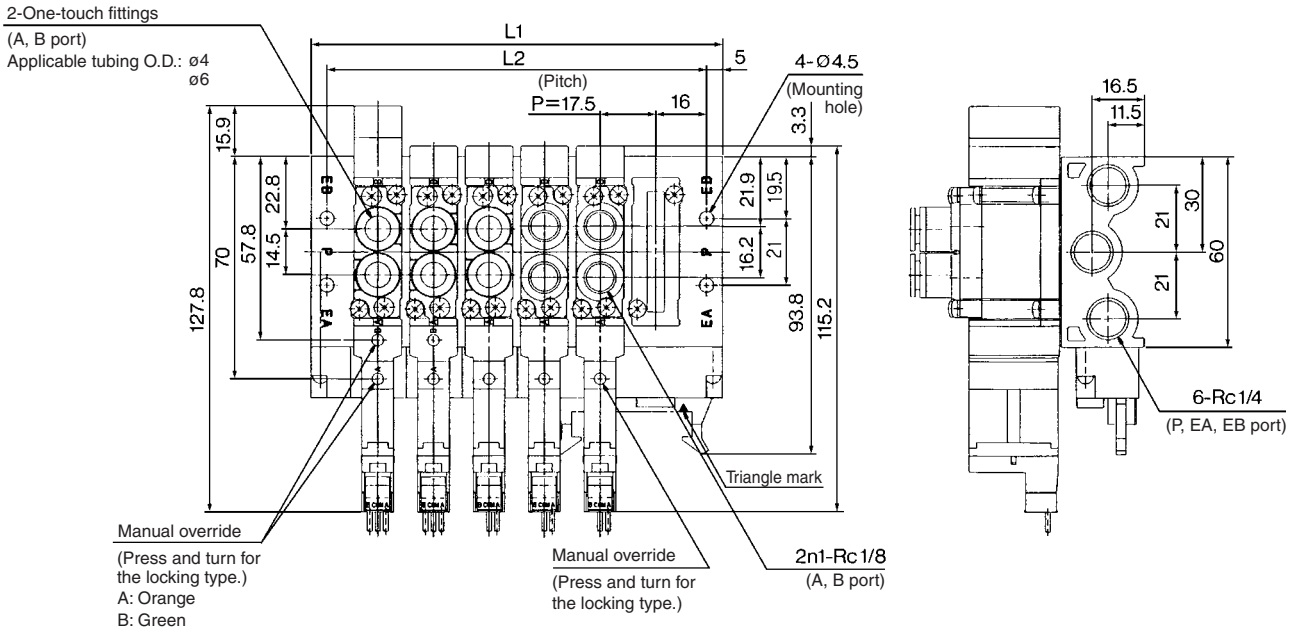
Dimensions

Applicable fittings fitting ød	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12
5/32"	**KQ2P-03**	16	32	6
1/4"	**KQ2P-07**	18	35	8.5
5/16"	**KQ2P-09**	20.5	39	10
3/8"	**KQ2P-11**	22	43	11.5

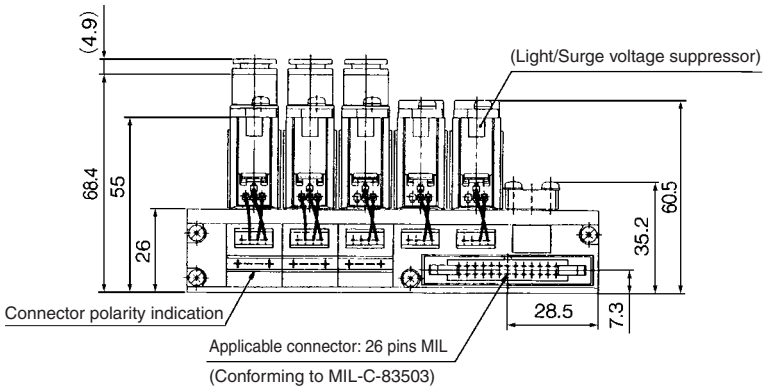
⚠ Warning

When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions in pages 1-6-51 to 1-6-53, and then mount it.

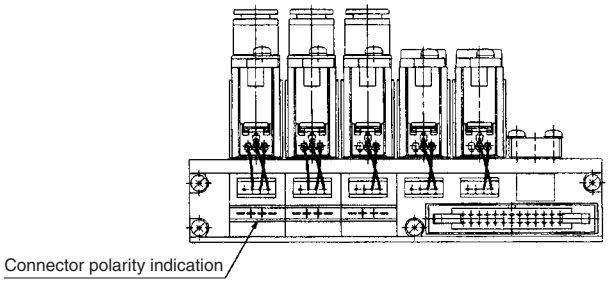
SX5000: SS5X5-20P- Stations



(n) ····· (2) (1) stations



SS5X5-20N



n: Stations (n1 + n2)

Stations n	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

Type 41
Type 42

Series SX3000/5000/7000
Base Mounted Manifold
Bar Stock Type
Individual Wiring

How to Order Manifold

Type 41 (Compact type)

SS5X 5 — 41 — 05 — C8 □

Series

3	SX3000
5	SX5000

Stations

02	2 stations
⋮	⋮
20	20 stations

A/B port size
Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SX3000
01	1/8	SX5000

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
C6	One-touch fitting for ø6	SX5000
C8	One-touch fitting for ø8	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N7	One-touch fitting for ø1/4"	SX5000
N9	One-touch fitting for ø5/16"	

Type 42 (Common external pilot type)

SS5X 5 — 42 — 05 — C8 □

Series

3	SX3000
5	SX5000
7	SX7000

Stations

02	2 stations
⋮	⋮
20	20 stations

A/B port size
Thread piping

Symbol	Port size	Applicable series
01	1/8	SX3000
02	1/4	SX5000
02	1/4	SX7000

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

One-touch fitting (Metric size)

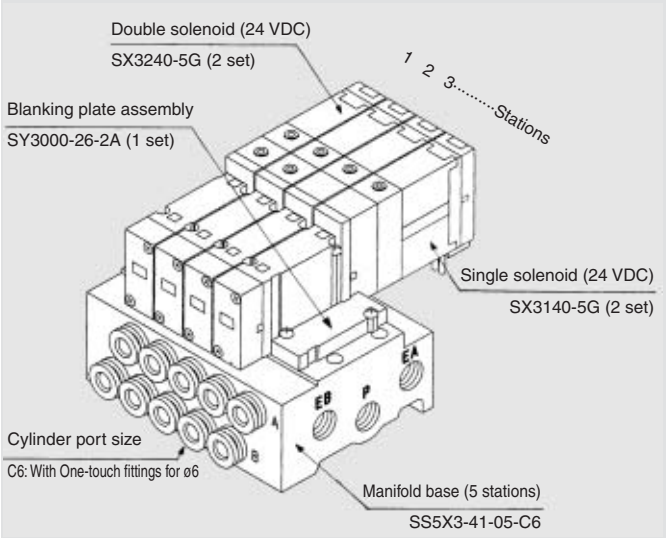
Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
C6	One-touch fitting for ø6	SX5000
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	SX7000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N7	One-touch fitting for ø1/4"	SX5000
N9	One-touch fitting for ø5/16"	
N11	One-touch fitting for ø3/8"	SX7000

How to Order Valve Manifold Assembly

Ordering example



SS5X3-41-05-C6····· 1 set (Type 41, 5-station manifold base part no.)
∗SX3240-5G ····· 2 sets (Double solenoid part no.)
∗SX3140-5G ····· 2 sets (Single solenoid part no.)
∗SY3000-26-9A····· 1 set (Blanking plate assembly 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 number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

• Connector assembly for L and M types·····Refer to page 1-6-8.
• Common connector ass'y for manifold·····Refer to page 1-6-9.

How to Order Valves

SX [5] [2] **40** [ ] — [5] [N] [L] [ ] [ ]

Series

3	SX3000
5	SX5000
7	SX7000

Type of actuation

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

Pilot type

Nil	Internal pilot
R	External pilot

Rated voltage

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

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.

Electrical entry

Grommet	L plug connector	M plug connector
G: Lead wire length 300 mm **H:** Lead wire length 600 mm	**L:** With lead wire (Length 300 mm) **LN:** Without lead wire **LO:** Without connector	**M:** With lead wire (Length 300 mm) **MN:** Without lead wire **MO:** Without connector

* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

Manual override

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

Manifold Specifications

Model		SS5X3-41	SS5X3-42	SS5X5-41	SS5X5-42	SS5X7-42
Applicable valve		SX3□40	SX3□40(R)	SX5□40	SX5□40(R)	SX7□40(R)
Manifold type		Single base/B mount				
P(SUP)/R(EXH)		Common SUP/Common EXH				
Valve stations Note)		2 to 20 stations				
A, B Porting specifications	Location	Base				
	Direction	Side				
Port size	P, EA, EB port	Rc 1/8		Rc 1/4		Rc 1/4
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	Rc 1/8 C4 (One-touch fitting ø4) C6 (One-touch fitting for ø6)	Rc 1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	Rc 1/4 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	Rc 1/4 C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Stations		W = 30n + 50	W = 37n + 63	W = 61n + 101	W = 79n + 127	W = 100n + 151

Note) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA and EB port on both sides.

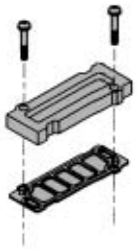
Flow Characteristics

Model	Port size		Flow characteristics Note)					
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5X3-41	Rc 1/8	C6	0.75	0.19	0.18	0.81	0.23	0.20
SS5X3-42	Rc 1/8	C6	0.75	0.20	0.18	0.82	0.20	0.20
SS5X5-41	Rc 1/4	C8	1.8	0.23	0.44	1.9	0.16	0.45
SS5X5-42	Rc 1/4	C8	1.9	0.20	0.46	1.9	0.12	0.43
SS5X7-42	Rc 1/4	C10	3.0	0.25	0.75	3.0	0.12	0.66

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Manifold Option

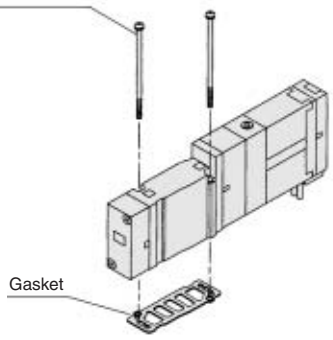
■ Blanking plate assembly



Series	Assembly part no.
SX3000	SY3000-26-9A
SX5000	SY5000-26-20A
SX7000	SY7000-26-22A

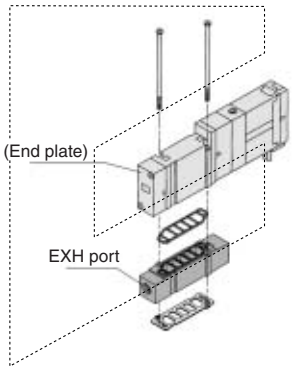
■ Bolt and gasket part no.

Round head combination screw



Series	Round head combination screw	Gasket
SX3000	SX3000-22-2 (M2 x 24)	SY3000-11-25
SX5000	M3 x 30 (Matt nickel plated)	SY5000-11-15
SX7000	M4 x 35 (Matt nickel plated)	SY7000-11-11

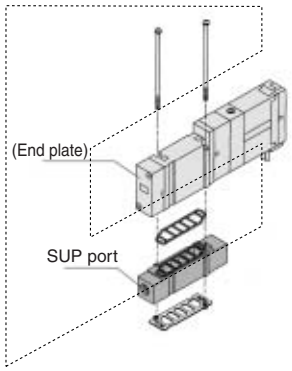
■ Individual EXH spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-39-2A	M5 x 0.8
SX5000	SX5000-39-16☒A	1/8
SX7000	SX7000-39-16☒A	1/4

Note) The EXH port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

■ Individual SUP spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-38-2A	M5 x 0.8
SX5000	SX5000-38-16☒A	1/8
SX7000	SX7000-38-16☒A	1/4

Note) The SUP port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

∗ Thread type

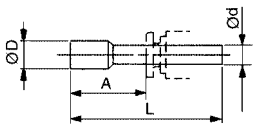
Nil	Rc
F	G
N	NPT
T	NPTF

■ Plug

Inserted into an unused cylinder port and SUP/EXH ports.
Purchasing order is available in units of 10 pieces.

Dimensions

Applicable fittings fitting ød	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12
5/32"	**KQ2P-03**	16	32	6
1/4"	**KQ2P-07**	18	35	8.5
5/16"	**KQ2P-09**	20.5	39	10
3/8"	**KQ2P-11**	22	43	11.5



⚠ Caution

Mounting screw tightening torques

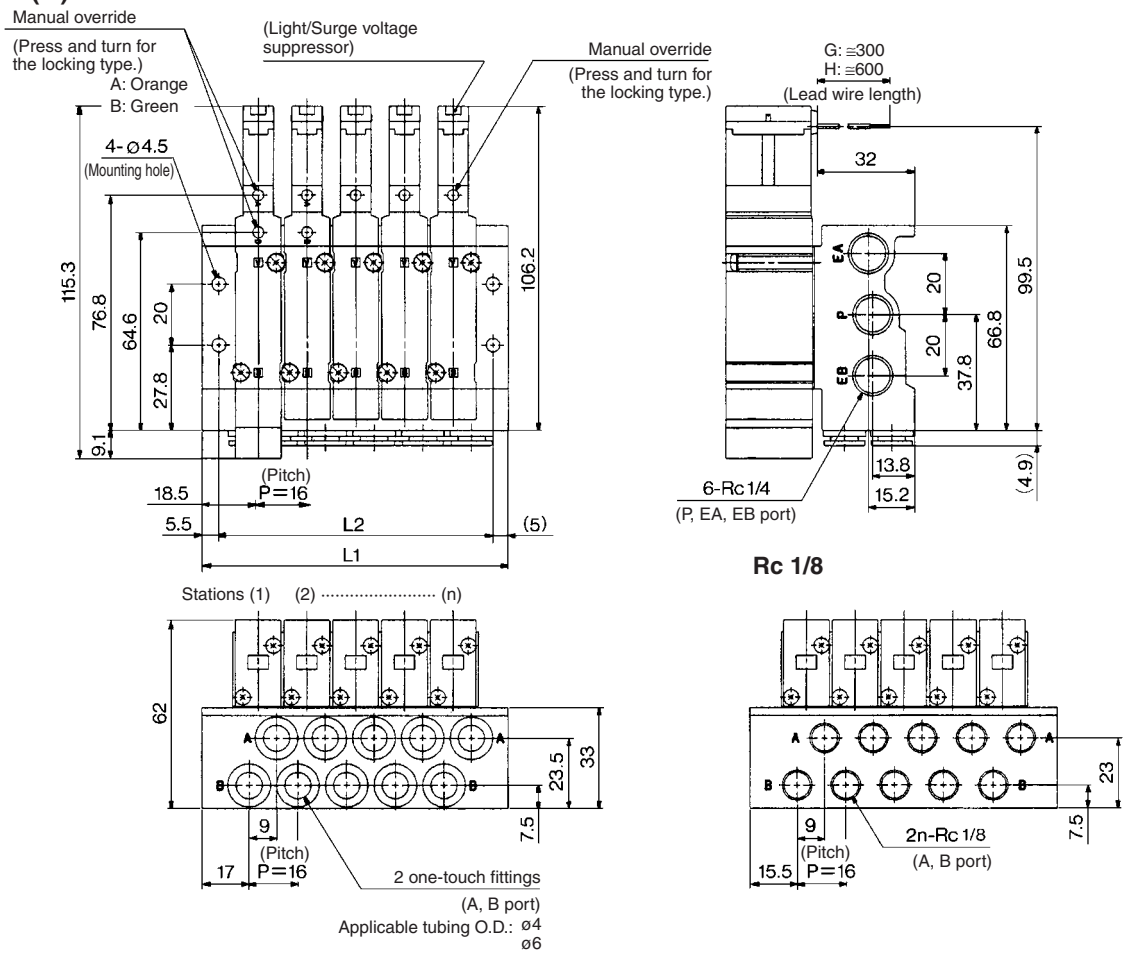
M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

⚠ Warning

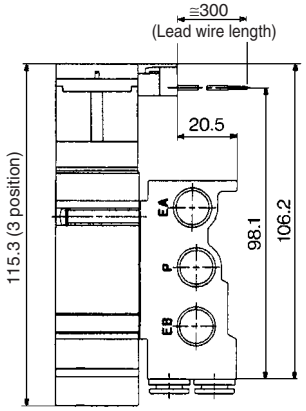
When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions in pages 1-6-57 to 1-6-63, and then mount it.

SX5000: SS5X5-41- Stations -01/C6/C8

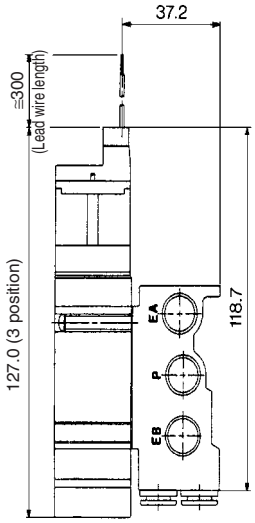
Grommet (G)



L plug connector (L)



M plug connector (M)

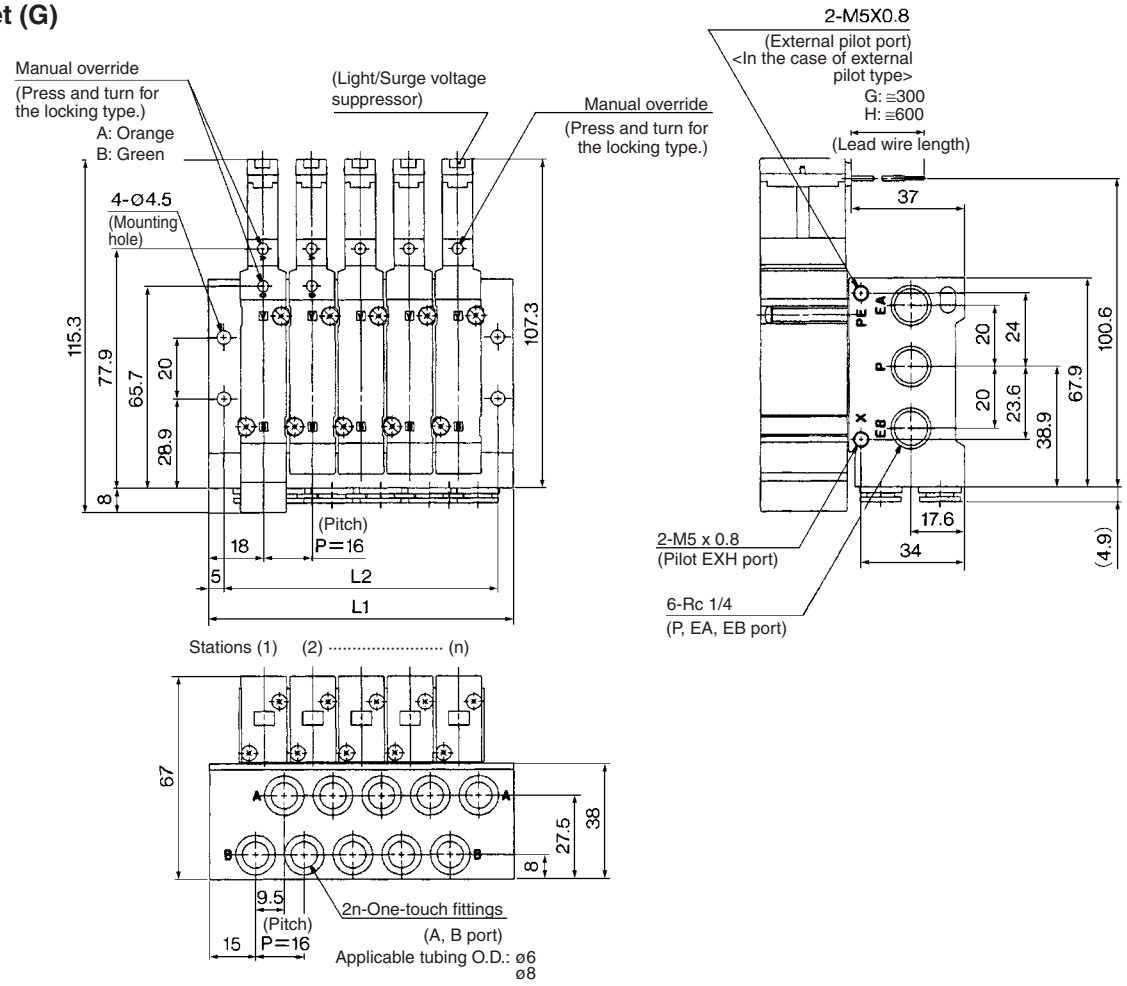


(mm)

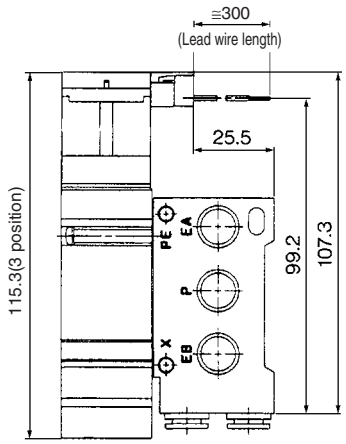
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52.5	68.5	84.5	100.5	116.5	132.5	148.5	164.5	180.5	196.5	212.5	228.5	244.5	260.5	276.5	292.5	308.5	324.5	340.5
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

SX5000: SS5X5-42- Stations -C6/C8

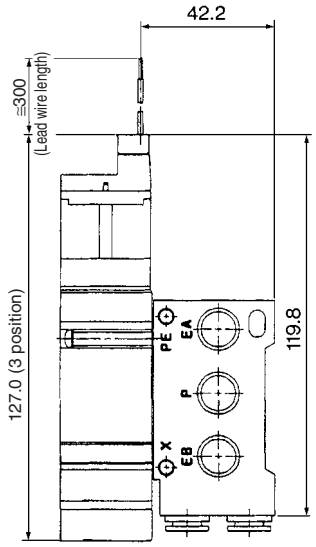
Grommet (G)



L plug connector (L)



M plug connector (M)

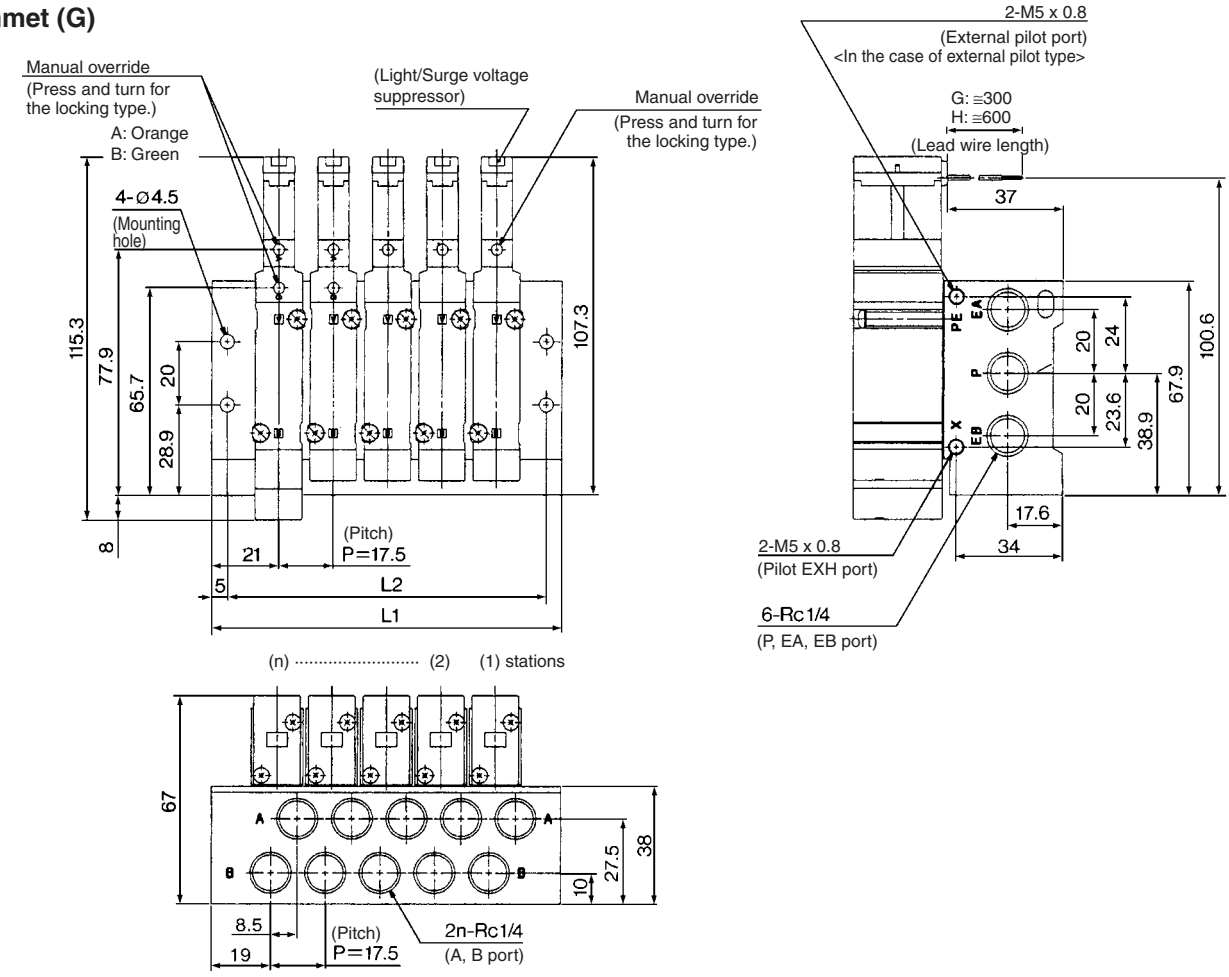


(mm)

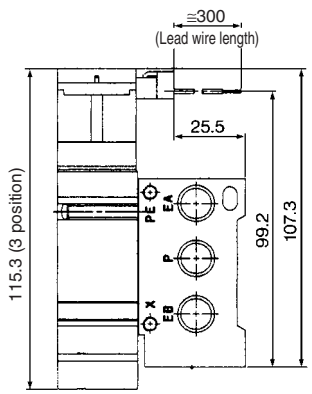
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

SX5000: SS5X5-42- Stations -02

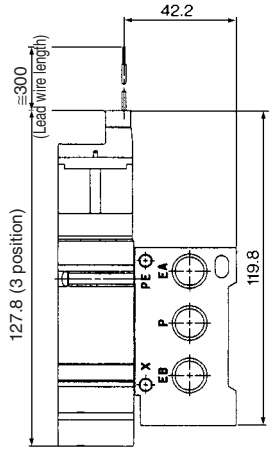
Grommet (G)



L plug connector (L)



M plug connector (M)



(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	59.5	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5	322	339.5	357	374.5
L2	49.5	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5	242	259.5	277	294.5	312	329.5	347	364.5

Type 41P/N
Type 42P/N

Series SX3000/5000/7000
Base Mounted Manifold
Bar Stock Type
Flat Ribbon Cable

How to Order Manifold

Type 41P/N (Compact type)

SS5X 5 — 41 P — 05 — C8 ☐

Series

3	SX3000
5	SX5000

Common specifications

P	Positive common
N	Negative common

Stations

03	3 stations
⋮	⋮
12	12 stations

Note) For SS5X3: 4 to 12 stations.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A/B port size Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SX3000
01	1/8	SX5000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
C6	One-touch fitting for ø6	SX5000
C8	One-touch fitting for ø8	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N7	One-touch fitting for ø1/4"	SX5000
N9	One-touch fitting for ø5/16"	

Type 42P/N (Common external pilot type)

SS5X 5 — 42 P — 05 — C8 ☐

Series

3	SX3000
5	SX5000
7	SX7000

Common specifications

P	Positive common
N	Negative common

Stations

03	3 stations
⋮	⋮
12	12 stations

Note) For SS5X3: 4 to 12 stations.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A/B port size Thread piping

Symbol	Port size	Applicable series
01	1/8	SX3000
02	1/4	SX5000
02	1/4	SX7000

One-touch fitting (Metric size)

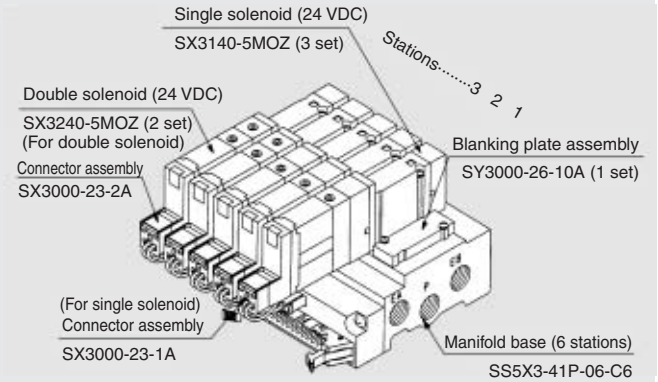
Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
C6	One-touch fitting for ø6	SX5000
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	SX7000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
N7	One-touch fitting for ø1/4"	SX5000
N9	One-touch fitting for ø5/16"	
N11	One-touch fitting for ø3/8"	SX7000

How to Order Valve Manifold Assembly

Ordering example



SS5X3-41P-06-C6 ····· 1 set (Type 41P, 6-station manifold base part no.)
∗SY3000-26-10A····· 1 set (Blanking plate assembly part no.)
∗SX3140-5MOZ ····· 3 sets (Single solenoid part no.)
∗SX3240-5MOZ ····· 2 sets (Double solenoid part no.)
∗SX3000-23-1A ····· 3 sets (Connector assembly no.)
∗SX3000-23-2A ····· 2 sets (Connector assembly 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 number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

How to Order Valves

SX [5] [1] **40** [ ] — [5] [N] **MOZ** [ ]

Series

3	SX3000
5	SX5000
7	SX7000

Type of actuation

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

Pilot type

Nil	Internal pilot
R	External pilot

Rated voltage

5	24 VDC
6	12 VDC

Common specifications

Nil	Positive common
N	Negative common

* Common specifications for the valve must correspond with common specifications for the manifold.

Manual override

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

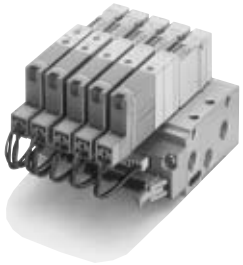
How to Order Connector Assembly

- Positive common specifications
  For single solenoid: SX3000-23-1A
  For double solenoid, 3 position: SX3000-23-2A
- Negative common specifications
  For single solenoid: SX3000-24-1A
  For double solenoid, 3 position: SX3000-24-2A

For detailed information on connector assembly, refer to page 1-6-9.

- **Multiple valve wiring is simplified through the use of the flat cable connector.**
- **Clean appearance**

In case of a flat cable style, 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		SS5X3-41P/N	SS5X3-42P/N	SS5X5-41P/N	SS5X5-42P/N	SS5X7-42P/N
Applicable valve		SX3□40	SX3□40(R)	SX5□40	SX5□40(R)	SX7□40(R)
Manifold type		Single base/B mount				
P (SUP)/R (EXH)		Common SUP/Common EXH				
Valve stations (1)		4 to 12 stations		3 to 12 stations		
A, B port specifications	Location	Base				
	Direction	Side				
Port size	P, EA, EB port	Rc 1/8		Rc 1/4		Rc 1/4
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	Rc 1/8 C4 (One-touch fitting ø4) C6 (One-touch fitting for ø6)	Rc 1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	Rc 1/4 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	Rc 1/4 C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Stations		W = 39n + 83	W = 48n + 99	W = 67n + 118	W = 88n + 151	W = 109n + 174
Applicable flat ribbon cable connector		Socket: 26 pins MIL with strain relief (Conforming to MIL-C-83503)				
Internal wiring (2)		+COM (Type 41P, 42P), –COM (Type 41N, 42N)				
Rated voltage		12, 24 VDC				

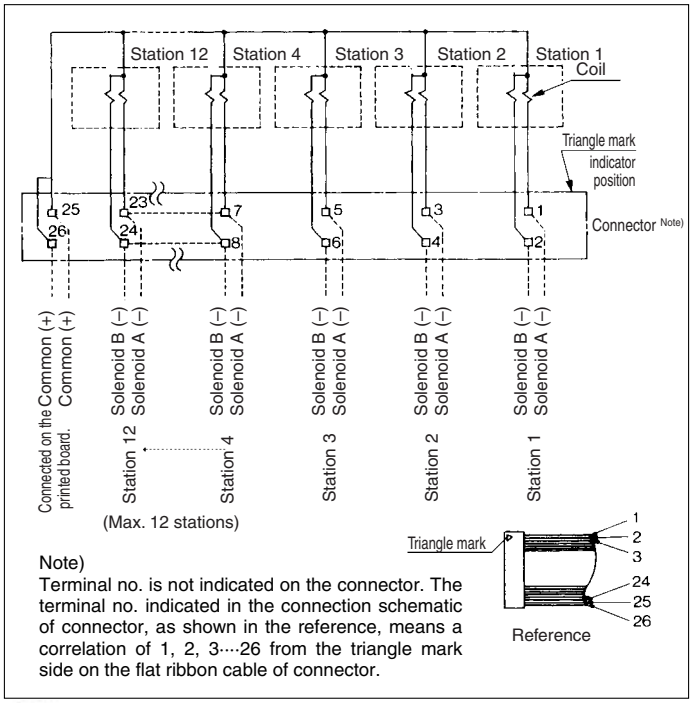
Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA and EB port on both sides.
Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.

Flow Characteristics

Model	Port size		Flow characteristics					
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5X3-41P/N	Rc 1/8	C6	0.75	0.19	0.18	0.81	0.23	0.20
SS5X3-42P/N	Rc 1/8	C6	0.75	0.20	0.18	0.82	0.20	0.20
SS5X5-41P/N	Rc 1/4	C8	1.8	0.23	0.44	1.9	0.16	0.45
SS5X5-42P/N	Rc 1/4	C8	1.9	0.20	0.46	1.9	0.12	0.43
SS5X7-42P/N	Rc 1/4	C10	3.0	0.25	0.75	3.0	0.12	0.66

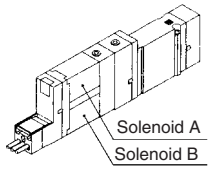
Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Internal Wiring of Manifold



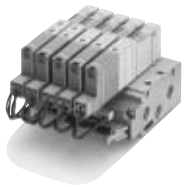
Note)
Terminal no. is not indicated on the connector. The terminal no. indicated in the connection schematic of connector, as shown in the reference, means a correlation of 1, 2, 3····26 from the triangle mark side on the flat ribbon cable of connector.

- For more than 9 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations is 12. If more than 12 stations are required, please consult with SMC.
- –COM and +COM specifications are available. (Diagram above is for +COM specifications.)



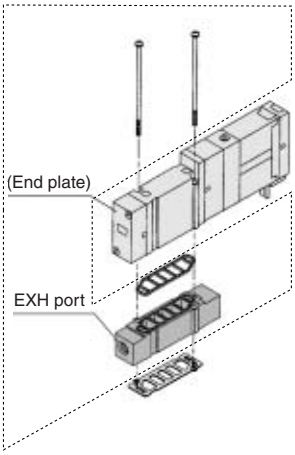
Manifold Option

■ Blanking plate assembly



Series	Assembly part no.
SX3000	SY3000-26-10A
SX5000	SY5000-26-21A
SX7000	SY7000-26-23A

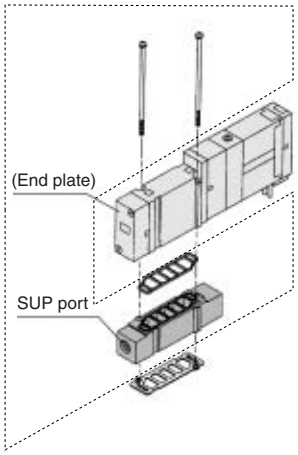
■ Individual EXH spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-39-2A	M5 x 0.8
SX5000	SX5000-39-16⊠A	1/8
SX7000	SX7000-39-16⊠A	1/4

Note) For protection of the wiring unit section, the EXH port is on the end plate side.

■ Individual SUP spacer assembly



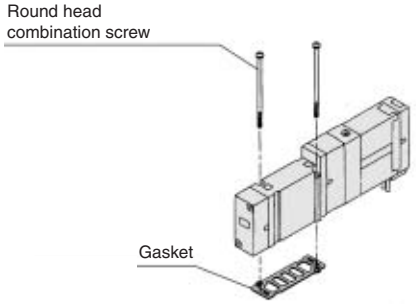
Series	Assembly part no.	Port size
SX3000	SX3000-38-2A	M5 x 0.8
SX5000	SX5000-38-16⊠A	1/8
SX7000	SX7000-38-16⊠A	1/4

Note) The SUP port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

∗ Thread type

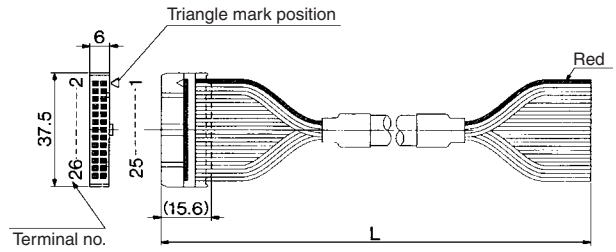
Nil	Rc
F	G
N	NPT
T	NPTF

■ Bolt and gasket part no.



Series	Round head combination screw	Gasket
SX3000	SX3000-22-2 (M2 x 24)	SY3000-11-25
SX5000	M3 x 30 (Matt nickel plated)	SY5000-11-15
SX7000	M4 x 35 (Matt nickel plated)	SY7000-11-11

■ Cable assembly AXT100-FC26-$^{1}_{\text{to}}{}_{3}$



Connector Assembly for Flat Ribbon Cable

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-FC26-1	Cable 26 cores x 28AWG
3 m	AXT100-FC26-2	
5 m	AXT100-FC26-3	

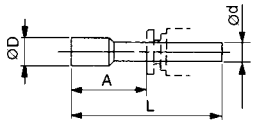
∗ For other commercial connectors, use a 26 pins type with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

- **Hirose Electric Co., Ltd.**
- **Japan Aviation Electronics Industry, Ltd.**
- **Sumitomo 3M Limited**
- **J.S.T. Mfg. Co., Ltd.**
- **Fujitsu Limited**

■ Plug

These are inserted in cylinder ports or SUP/EXH ports which are not being used.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12
5/32"	**KQ2P-03**	16	32	6
1/4"	**KQ2P-07**	18	35	8.5
5/16"	**KQ2P-09**	20.5	39	10
3/8"	**KQ2P-11**	22	43	11.5

⚠ Caution

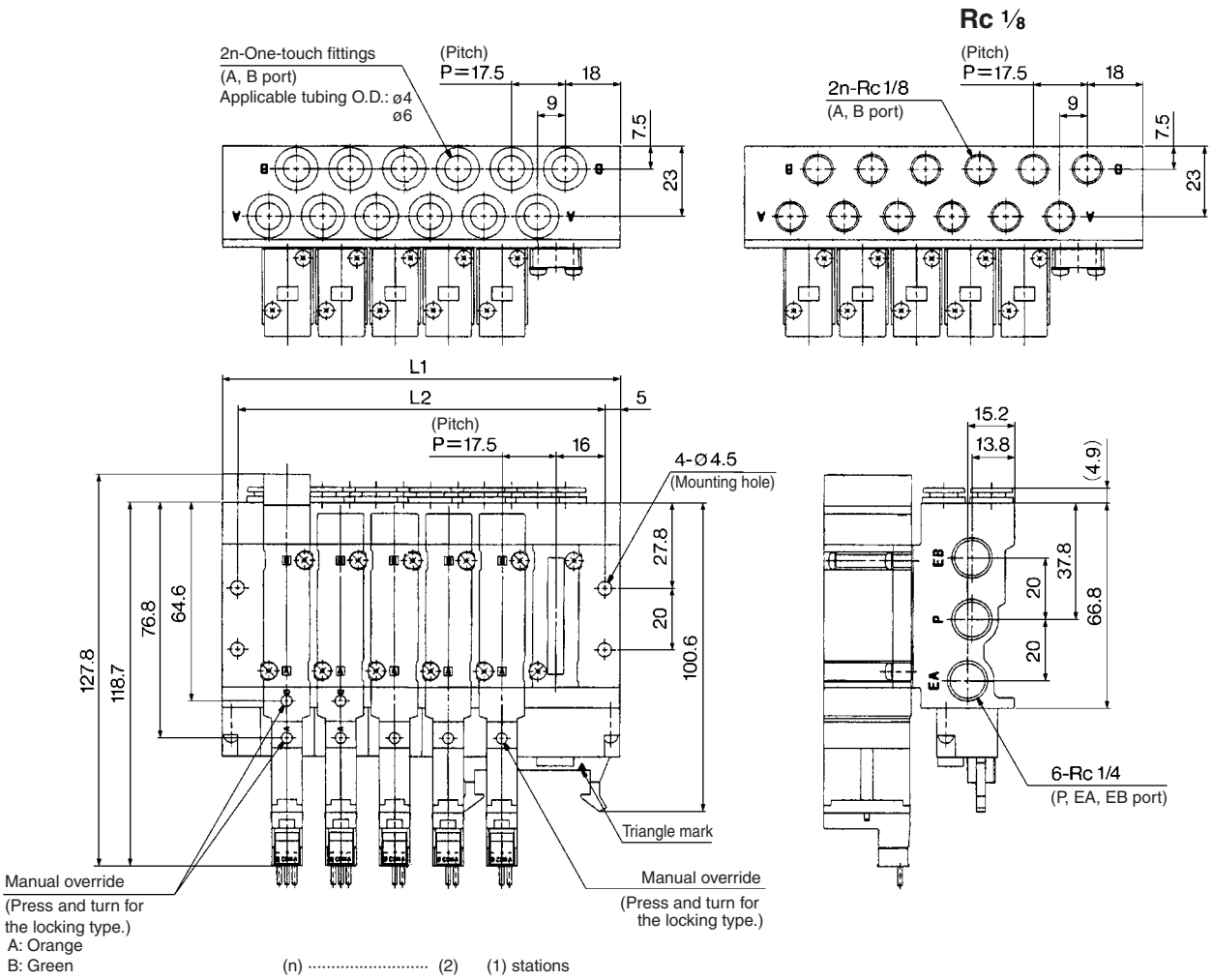
Mounting screw tightening torques

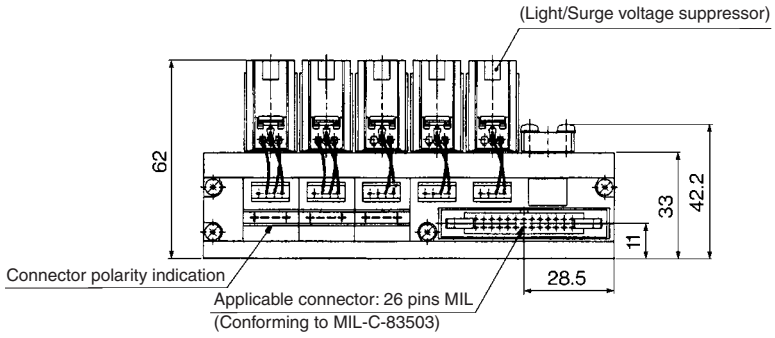
M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

⚠ Warning

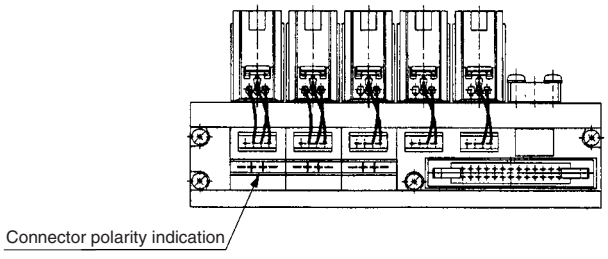
When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions in pages 1-6-68 to 1-6-72, and then mount it.

SX5000: SS5X5-41P- Stations -01/C6/C8





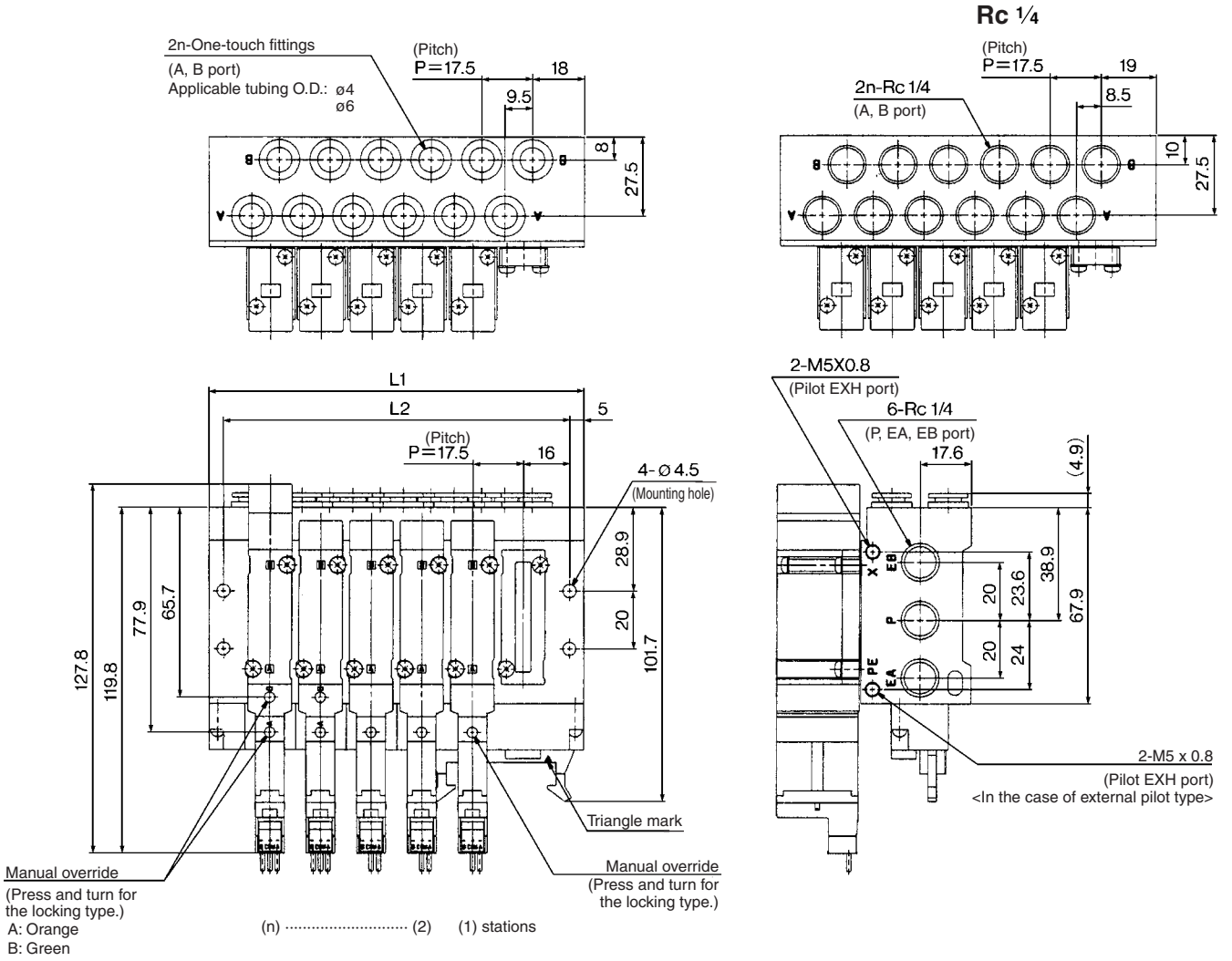
SS5X3-41N

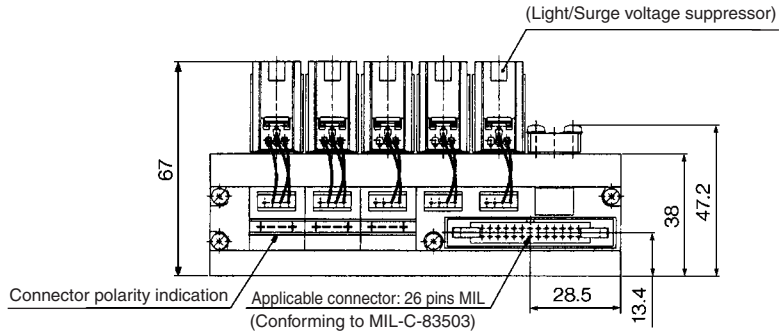


(mm)

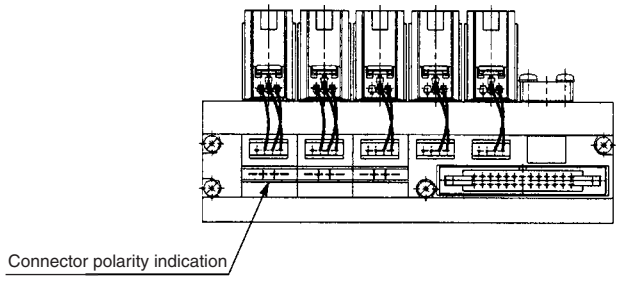
Stations n	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

SX5000: SS5X5-42P- Stations -02/C6/C8





SS5X5-42N



(mm)

Stations n	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

Type 45

Series SX3000/5000
Base Mounted Manifold
Stacking Type DIN Rail Mounted
Individual Wiring

How to Order Manifold

SS5X 3 – 45 – □ □ □ □

Series

3	SX3000
5	SX5000

Valve stations

02	2 stations
⋮	⋮
20	20 stations

SUP/EXH block assembly mounting position

Symbol	Mounting position	Applicable stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

A, B port size (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

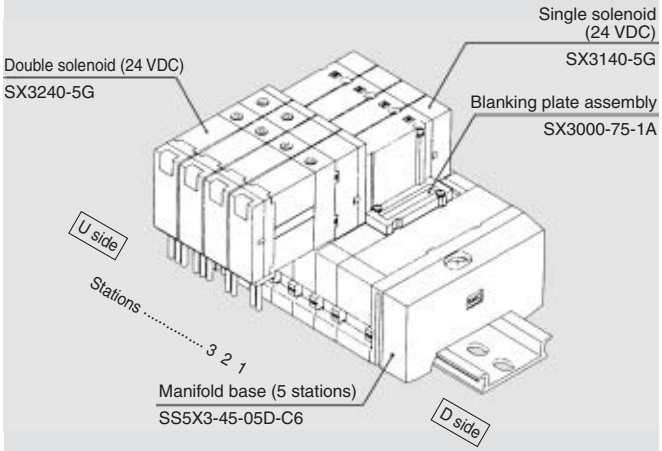
Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

• Connector assembly for L and M types·····Refer to page 1-6-8.
• Common connector assembly for manifold·····Refer to page 1-6-9.

How to Order Valve Manifold Assembly

Ordering example



SS5X3-45-05D-C6 ···· 1 set (Type 45, 5-station manifold base part no.)
∗SX3000-75-1A ····· 1 set (Blanking plate assembly part no.)
∗SX3140-5G ····· 2 sets (Single solenoid part no.)
∗SX3240-5G ····· 2 sets (Double solenoid part no.)

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

The valve arrangement is numbered as the 1st. station from D side regardless of the mounting position of SUP/EXH block assembly. In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the Manifold Specification Sheet to instruct us.

How to Order Valves

SX [5] [2] 40 — [5] [N] [L] [ ] [ ]

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

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

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.

Electrical entry

Grommet	L plug connector	M plug connector
G: Lead wire length 300 mm **H:** Lead wire length 600 mm	**L:** With lead wire (Length 300 mm) **LN:** Without lead wire **LO:** Without connector	**M:** With lead wire (Length 300 mm) **MN:** Without lead wire **MO:** Without connector

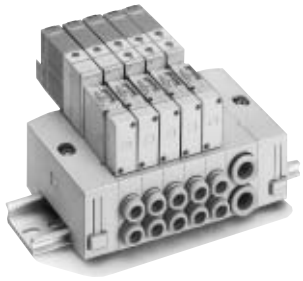
∗ The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

Manual override

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



Manifold Specifications

Model		SS5X3-45	SS5X5-45
Applicable valve		SX3□40	SX5□40
Manifold type		Stacking type/DIN rail mounted	
P(SUP), R(EXH)		Common SUP/Common EXH	
Valve stations Note)		2 to 20 stations	
A, B port specifications	Location	Base	
	Direction	Side	
Port size	P, R port	C8 (One-touch fitting for ø8)	C10 (One-touch fitting for ø10)
	A, B port	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)
Manifold base weight W (g) n: Stations		2 to 10 stations: W = 22n + 118 11 to 20 stations: W = 22n + 140	2 to 10 stations: W = 47n + 156 11 to 20 stations: W = 47n + 190

Note) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.

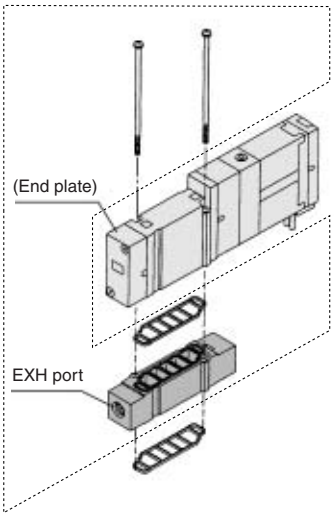
Flow Characteristics

Model	Port size		Flow characteristics					
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm^3/(s·bar)]	b	Cv	C [dm^3/(s·bar)]	b	Cv
SS5X3-45	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5X5-45	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Manifold Option

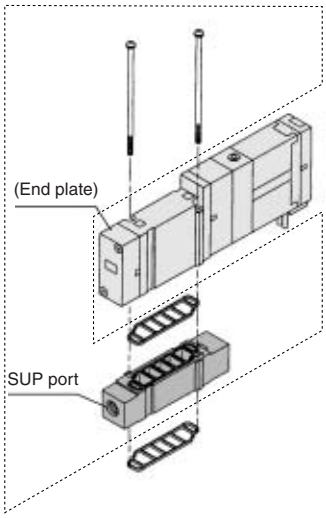
■ Individual SUP spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-38-2A	M5 x 0.8
SX5000	SX5000-38-16⊠A	1/8

Note) SUP port may be either on the lead wire side or the end plate side. (Factory assembled spacer will be shipped with the orientation shown in the figure.)

■ Individual EXH spacer assembly



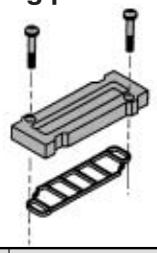
Series	Assembly part no.	Port size
SX3000	SX3000-39-2A	M5 x 0.8
SX5000	SX5000-39-16⊠A	1/8

Note) The EXH port may be either on the lead wire side or on the end plate side.

∗ **Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

■ Blanking plate assembly



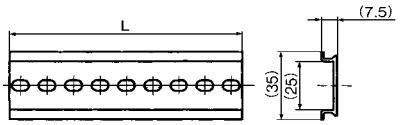
Series	Assembly part no.
SX3000	SX3000-75-1A
SX5000	SX5000-76-5A

■ Dimensions/DIN rail

VZ1000 – 11 – 1 – □

● **Refer to L dimensions**

∗ Fill in l with an appropriate no. listed on the table of DIN rail dimensions shown below.



No.	0	1	2	3	4	5	6	7	8	9	10
L dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223
No.	11	12	13	14	15	16	17	18	19	20	21
L dimension	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5
No.	22	23	24	25	26	27	28	29	30	31	32
L dimension	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498
No.	33	34	35	36	37	38	39	40	41	42	43
L dimension	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	635.5
No.	44	45	46	47	48	49	50	51	52	53	54
L dimension	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773
No.	55	56	57	58	59	60	61	62	63	64	65
L dimension	785.5	798	810.5	823	835.5	848	860.5	873	885.5	898	910.5
No.	66	67	68	69	70	71					
L dimension	923	935.5	948	960.5	973	985.5					

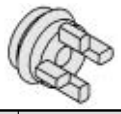
■ SUP block disk

By installing a SUP block disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.

Series	Part no.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

■ EXH block disk

By installing an EXH block disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two block disks are needed to divide both exhausts.)



Series	Part no.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

■ Lable for block disk

The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

Label for SUP block disk

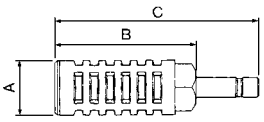
Label for EXH block disk

Label for SUP/EXH block disk

Note) When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

■ Silencer with One-touch fitting

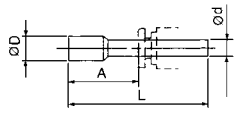
This silencer can be mounted on the manifold's port R (exhaust) with a single touch.



Series	Model	Effective area	A	B	C
SX3000 (ø8)	AN203-KM8	14 mm²	ø16	26	51
SX5000 (ø10)	AN200-KM10	26 mm²	ø22	53.8	80.8
	AN300-KM10	30 mm²	ø25	70	97

■ Plug

These are inserted in cylinder ports or SUP/EXH ports which are not being used.
Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings fitting ød	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12
5/32"	**KQ2P-03**	16	32	6
1/4"	**KQ2P-07**	18	35	8.5
5/16"	**KQ2P-09**	20.5	39	10
3/8"	**KQ2P-11**	22	43	11.5

⚠ Caution

Mounting screw tightening torques

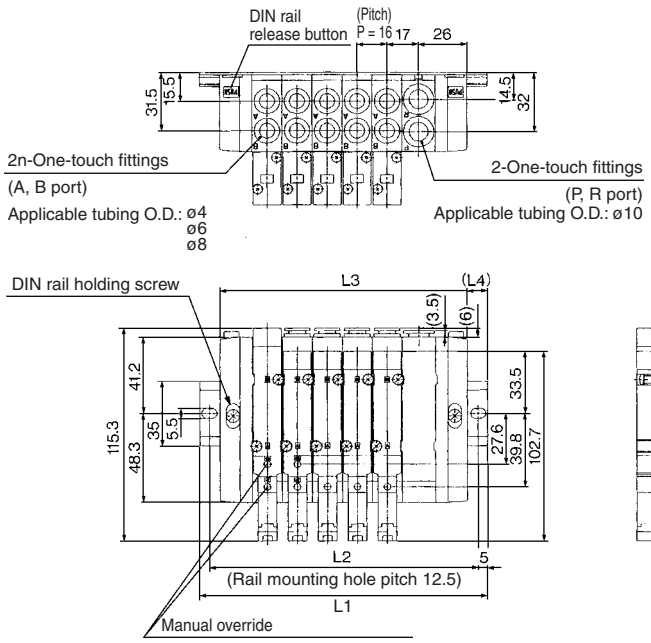
M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

⚠ Warning

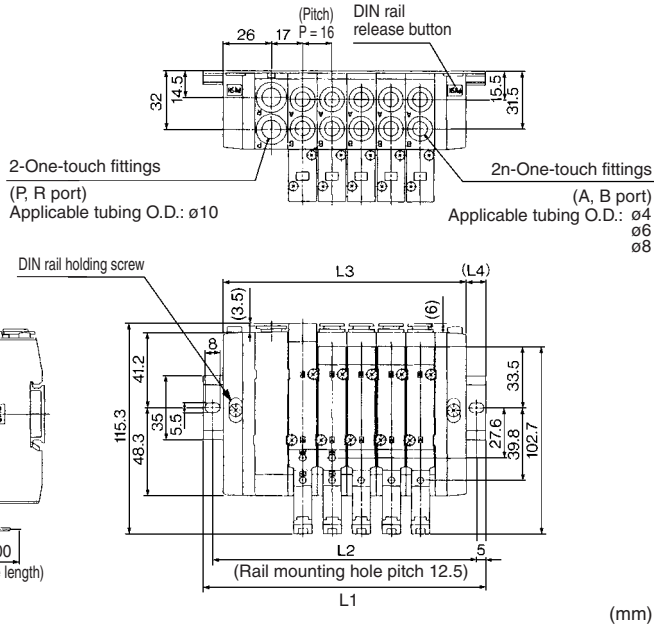
When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions in pages 1-6-78 to 1-6-79, and then mount it.

Dimensions: Series SX5000

SS5X5-45- Stations D-C4/C6/C8



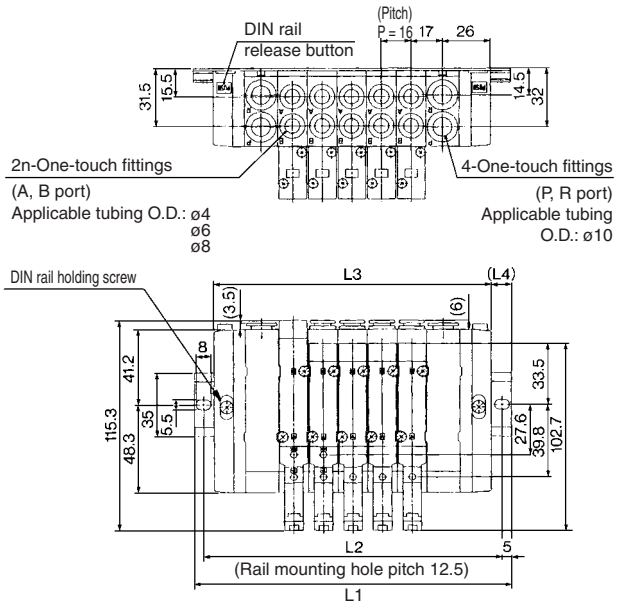
SS5X5-45- Stations U-C4/C6/C8



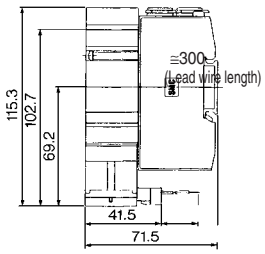
(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	110.5	135.5	148	160.5	173	198	210.5	223	235.5
L2	100	125	137.5	150	162.5	187.5	200	212.5	225
L3	84	100	116	132	148	164	180	196	212
L4	13	17.5	16	14	12.5	17	15	13.5	11.5

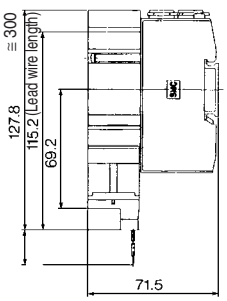
SS5X5-45- Stations B-C4/C6/C8



L plug connector



M plug connector



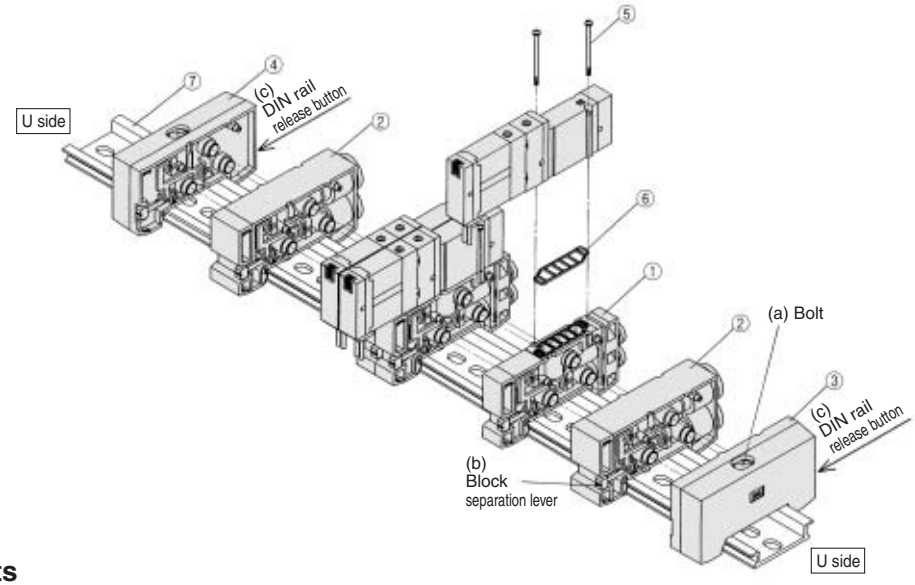
(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	223	248	260.5
L2	125	137.5	150	175	187.5	200	212.5	237.5	250
L3	102	118	134	150	166	182	198	214	230
L4	16.5	15	13	17.5	16	14	12.5	17	15

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423
L2	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5
L3	246	262	278	294	310	326	342	358	374	390
L4	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5

Exploded View/DIN Rail Manifold

Type 45



Replacement Parts

No.	Description	Part no.		Note
		SX3000	SX5000	
①	Manifold block assembly	SX3000-50-1A-□□ □□	SX5000-50-1A-C6□□ □□	• SX3000 (Metric size) (Inch size) C4: With One-touch fitting for ø4 N3: With One-touch fitting for ø5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø1/4" SX5000 (Metric size) (Inch size) C4: With One-touch fitting for ø4 N3: With One-touch fitting for ø5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø1/4" C8: With One-touch fitting for ø8 N9: With One-touch fitting for ø5/16" (Gasket ⑥ is included.)
②	SUP/EXH block assembly	(Metric size) SX3000-51-1A (Inch size) SX3000-51-15A	(Metric size) SX5000-51-1A (Inch size) SX3000-51-15A	P, R port SX3000 (Metric size) With One-touch fitting for ø8 (Inch size) With One-touch fittings for ø5/16" P, R port SX5000 (Metric size) With One-touch fitting for ø10 (Inch size) With One-touch fittings for ø3/8"
③	End block assembly R	SX3000-52-1A	SX5000-52-1A	For D side
④	End block assembly L	SX3000-53-1A	SX5000-53-1A	For U side
⑤	Round head combination screw	SX3000-22-2 (M2 x 24)	M3 x 30 (Matt nickel plated)	
⑥	Gasket	SX3000-57-4	SX5000-57-6	
⑦	DIN rail	VZ1000-11-1-□		Refer to page 1-6-77.

How to Increase Manifold Bases

Station expansion is possible at any position.

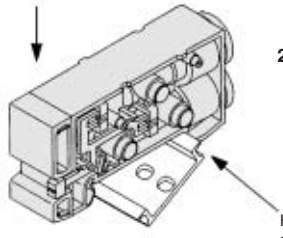
(1) Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail release buttons (c) at two locations, separate the manifold base from the DIN rail.)

(2) Press manifold block assembly splitting button (b), that are at the location where manifold bases are to be added, until button (b) locks, and then separate the block assemblies.

(3) Mount additional manifold block assembly on the DIN rail as shown in the figure.

(4) Press the block assembly until a click sound is produced, and tighten the bolts (a) to fix them to the DIN rail.
⚠ **Caution** (Tightening torque: 1.4 N·m)
(While lightly holding the blocks after fixing an end block on one side, tighten the other end block for better sealing.)

Fig. (1) Block mounting procedure

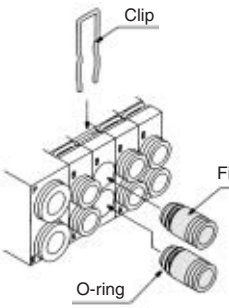


Hook this section on the DIN rail and press in the direction of the arrow until a click sound is generated.

⚠ Caution

1. When adding manifold bases to use more than 10 stations, add SUP/EXH block assembly, as well.
2. When bolt (a) for the end block is not sufficiently tightened during reassembly, air leakage may result. Before supplying air, check that there is no gap between blocks and that the manifold block is firmly fixed to the DIN rail in order to ensure air supply without leakage.

How to Change Fitting Assembly



Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly.
After removing the valve, remove the clip with a screwdriver. To mount a new fitting assembly insert it and then insert a clip so it does not come out of the manifold block.

Fitting Assembly Part No.

Metric size

SX3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SX5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8

Inch size

SX3000	One-touch fitting for ø5/32"	VVQ1000-50A-N3
	One-touch fitting for ø1/4"	VVQ1000-50A-N7
SX5000	One-touch fitting for ø5/32"	VVQ1000-51A-N3
	One-touch fitting for ø1/4"	VVQ1000-51A-N7
	One-touch fitting for ø5/16"	VVQ1000-51A-N9

Note 1) P and R ports cannot be changed.
Note 2) Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.

Type 45□

Series SX3000/5000
Base Mounted Manifold
Stacking Type DIN Rail Mounted
Plug-in

How to Order Manifold

Type 45F (D-sub connector, 25 pins type)

SS5X 3 – 45 □ F D – 05 U – C4 □ – □

Series

3	SX3000
5	SX5000

Common specifications

Nil	Positive common
N	Negative common

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications(1)
⋮	⋮	
10	10 stations	
02	2 stations	Available up to 20 solenoids. Specify(2) the wiring specifications on the manifold specification sheet.
⋮	⋮	
20	20 stations	

• This also includes the number of blanking plate assembly.

Note 1) Double wiring specifications: Single, double and 3 position solenoid valves can be used on all manifold stations.

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

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Voltage

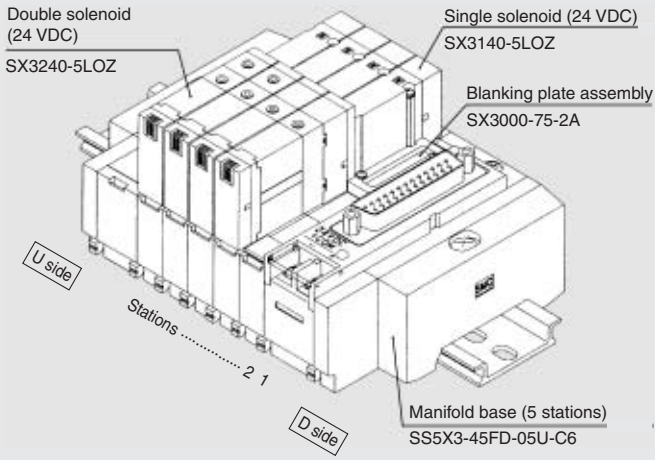
Nil	24 VDC
12V	12 VDC

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

How to Order Valve Manifold Assembly

Ordering example (Type 45F/D-sub connector (25 pins) type)



SS5X3-45FD-05U-C6 ·· 1 set (Type 45F D-sub connector 5 stations manifold base no.)
∗SX3000-75-2A ····· 1 set (Blanking plate assembly part no.)
∗SX3140-5LOZ ····· 2 sets (Single solenoid part no.)
∗SX3240-5LOZ ····· 2 sets (Double solenoid part no.)

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

• They will be assembled in the order listed starting at the first station at the D side even if the connector box is located at either end. When ordering with the double wiring specification, specify it in order, beginning with the 1 station on the D side.
• When special wiring is required, use the manifold specification sheet.

How to Order Valves (Type 45F, 45P□, 45T, 45T1)

SX 3 2 40 – 5 □ LOZ □

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

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

∗ Only Type 45T and 45T1 are available.

Common specifications

Nil	Positive common
N	Negative common

∗ Common specifications for the valve must correspond with common specifications for the manifold.

Manual override

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

How to Order Manifold

Type 45P□ (Flat ribbon cable type)

SS5X 3 – 45 □ P □ D – 05 U – C4 □ □

Series

3	SX3000
5	SX5000

Common specifications

Nil	Positive common
N	Negative common

Connector poles

Symbol	Poles	Stations
Nil	26	2 to 20 stations
G	20	2 to 16 stations
H	10	2 to 8

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

A, B port size (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

Voltage

Nil	24 VDC
12V	12 VDC

Valve stations (Blanking plate assemblies are included.)

26 pins (P) connector

Symbol	Stations	Note
02	2 stations	Double wiring(1) specifications
⋮	⋮	
10	10 stations	
02	2 stations	Applicable up to 20(2) solenoids.
⋮	⋮	
20	20 stations	

20 pins (PG) connector

Symbol	Stations	Note
02	2 stations	Double wiring(1) specifications
⋮	⋮	
08	8 stations	
02	2 stations	Applicable up to 16(2) solenoids.
⋮	⋮	
16	16 stations	

10 pins (PH) connector

Symbol	Stations	Note
02	2 stations	Double wiring(1) specifications
⋮	⋮	
04	4 stations	
02	2 stations	Applicable up to 8(2) solenoids.
⋮	⋮	
08	8 stations	

Note 1) Double wiring specifications: Single, double and 3 position solenoid valves can be used on all manifold stations.
Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.).

Type 45T (9 pins terminal block type)

SS5X 3 – 45T D – 05 U – C4 □

Series

3	SX3000
5	SX5000

Terminal block mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring(1) specifications
⋮	⋮	
04	4 stations	
02	2 stations	Applicable up to 8(2) solenoids.
⋮	⋮	
08	8 stations	

• This also includes the number of blanking plate assemblies.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 8
D	D side	2 to 8
B	Both sides	2 to 8
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations maximum)

A, B port size (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Type 45T1 (18 pins terminal block type)

SS5X 3 – 45T1 D – 05 U – C4 □

Series

3	SX3000
5	SX5000

Terminal block mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring(1) specifications
⋮	⋮	
08	8 stations	
02	2 stations	Applicable up to 17(2) solenoids.
⋮	⋮	
17	17	

• This also includes the number of blanking plate assemblies.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 17
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations maximum)

A, B port size (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Note 1) Double wiring specifications: Single, double and 3 position solenoid valves can be used on all manifold stations.
Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)
Note 3) The terminal block (45T□) manifold has no common polarity. It can be used for both positive and negative common.

How to Order Manifold

Type 45□P (Flat ribbon cable type (PC wiring system compatible))

SS5X 3 – 45G D – 05 U – C4 □ – □

Series

3	SX3000
5	SX5000

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring[1] specifications
⋮	⋮	
08	8 stations	
02	2 stations	Applicable up to 16[2] solenoids.
⋮	⋮	
16	16 stations	

• This also includes the number of blanking plate assemblies.

Note 1) Double wiring specifications: Single, double and 3 position solenoid valves can be used on all manifold stations.

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

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

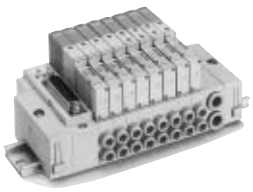
SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

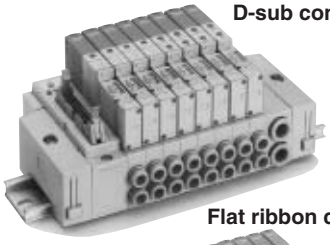
∗ For special specifications, indicate separately by the manifold specification sheet.

SUP/EXH block assembly specifications

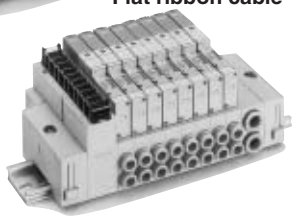
Symbol	Specifications
Nil	Internal pilot specifications
R	External pilot specifications
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer



D-sub connector



Flat ribbon cable



Terminal block

Manifold Specifications

Model			D-sub connector Type 45F	Flat ribbon cable type 45P□			Terminal block		Flat ribbon cable PC wiring system compatible
				Type 45P	Type 45PG	Type 45PH	Type 45T	Type 45T1	Type 45G
Manifold			Plug-in type						
P(SUP), R(EXH)			Common SUP/Common EXH						
Valve stations Note)			2 to 20 stations		2 to 16 stations	2 to 8 stations		2 to 17 stations	2 to 16 stations
A, B porting specifications		Location	Base						
		Direction	Side						
Port size	P, R port	SX3000	C8 (One-touch fitting for ø8)						
		SX5000	C10 (One-touch fitting for ø10)						
	A, B port	SX3000	C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)						
		SX5000	C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)/C8 (One-touch fitting for ø8)						
Connector			D-sub connector: Conforms to MIL-C-24308	Flat ribbon cable connector socket: 26 pins MIL with strain relief; Conforming to MIL-C-83503	Flat ribbon cable connector socket: 20 pins MIL with strain relief; Conforming to MIL-C-83503	Flat ribbon cable connector socket: 10 pins MIL with strain relief; Conforming to MIL-C-83503	Terminal block (M3) 9 pins	Terminal block (M3) 18 pins	Flat ribbon cable connector socket: 20 pins MIL with strain relief; Conforming to MIL-C-83503
Internal wiring			+COM (Type 45□), –COM (Type 45N□)				In common between +COM and –COM.		+ COM
Manifold base weight W (g) n: Stations (D-sub connector)		SX3000	2 to 10 stations: W = 26n + 172 11 to 20 stations: W = 26n + 199						
		SX5000	2 to 10 stations: W = 54n + 227 11 to 20 stations: W = 54n + 264						

Note) There is a limit to the number of stations available depending on the number of solenoids required. Please refer to the "How to Order". For more than 10 stations, supply pressure through the "P" ports at both ends of the manifold exhaust through both ends as well.

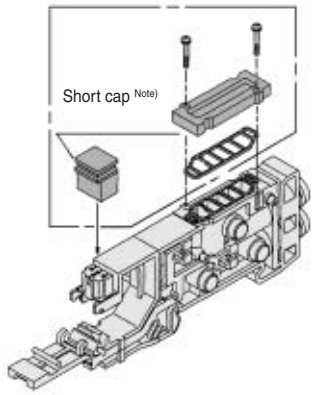
Flow Characteristics

Model	Port size		Flow characteristics					
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5X3-45I	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5X5-45I	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Manifold Option

■ Blanking plate assembly



Series	Assembly part no.
SX3000	SX3000-75-2A
SX5000	SX5000-76-6A

Note) When mounting blanking plate, be sure to mount a short cap.

■ SUP block disk

By installing a SUP block disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.

Series	Part no.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

■ EXH block disk

By installing an EXH block disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two block disks are needed to divide both exhausts.)

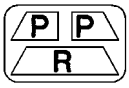
Series	Part no.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

■ Label for block disk

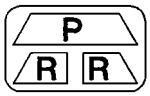
The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A (In common between SX3000 and 5000)

Label for SUP block disk



Label for EXH block disk

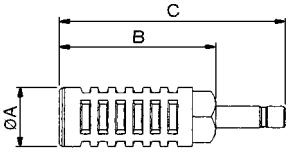


Label for SUP/EXH block disk

Note) When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

■ Silencer with One-touch fitting

This silencer can be mounted on the manifold's port R (exhaust) with a single touch.

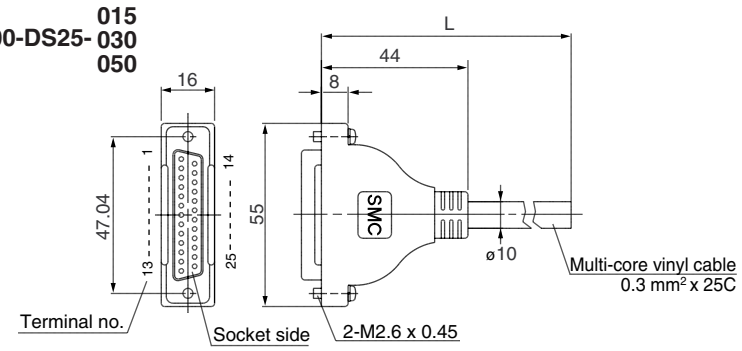


Series	Model	Effective area	A	B	C
SX3000 (ø8)	AN203-KM8	14 mm²	16	26	51
SX5000 (ø10)	AN200-KM10	26 mm²	22	53.8	80.8
	AN300-KM10	30 mm²	25	70	97

Manifold Option

■ D-sub connector (25 pins)/Cable assembly

AXT100-DS25- 015 / 030 / 050



Connector manufacturers' example

- **Hirose Electric Co., Ltd.**
- **Fujitsu Limited**
- **Japan Aviation Electronics Industry, Ltd.**
- **J.S.T. Mfg, Co., Ltd.**

D-sub Connector Cable Assembly

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 25 cores x 24AWG
3 m	AXT100-DS25-030	
5 m	AXT100-DS25-050	

∗ For other commercial connectors, use a 25 pins type with female connector conforming to MIL-C-24308.

Electric Characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit VAC, 1 min.	1000
Insulation resistance MΩkm, 20°C	5 or less

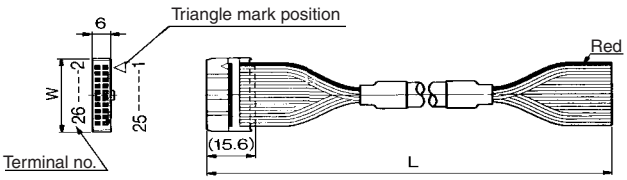
∗ The minimum bending radius of D-sub connector cable assembly is 20 mm.

D-sub Connector Cable Assembly Terminal No.

Terminal no.	Lead wire color	Dot marking
1	Black	None
2	Brown	None
3	Red	None
4	Orange	None
5	Yellow	None
6	Pink	None
7	Blue	None
8	Purple	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Purple	None
18	Gray	None
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	None

■ Flat ribbon cable connector/Cable assembly

AXT100-FC□- 1 to 3



Flat Ribbon Cable Assembly

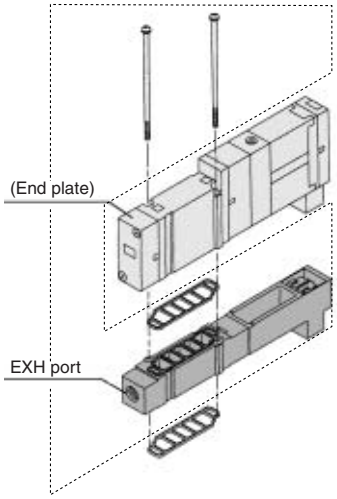
Cable length (L)	10 pins	20 pins	26 pins
1.5 m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3 m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5 m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector width (W)	17.2	30	37.5

∗ For other commercial connectors, use a type with strain relief that conform to MIL-C-83503.

Connector manufacturers' example

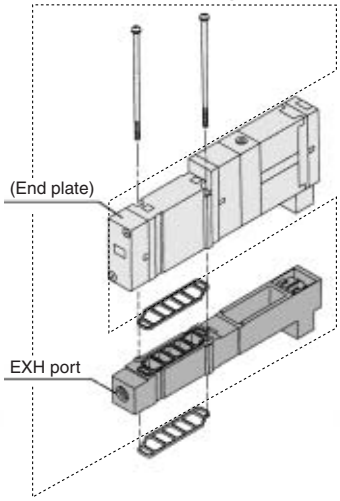
- **Hirose Electric Co., Ltd.**
- **Sumitomo 3M Limited**
- **Fujitsu Limited**
- **Japan Aviation Electronics Industry, Ltd.**
- **J.S.T. Mfg, Co., Ltd.**

■ Individual SUP spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-38-3A	M5 x 0.8
SX5000	SX5000-38-17□A	1/8

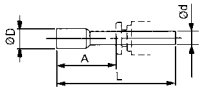
■ Individual EXH spacer assembly



Series	Assembly part no.	Port size
SX3000	SX3000-39-3A	M5 x 0.8
SX5000	SX5000-39-17□A	1/8

■ Plug

Inserted into an unused cylinder port and SUP/EXH ports. Purchasing order is available in units of 10 pieces.



∗ **Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

Dimensions

Applicable fittings size ød	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12
5/32"	**KQ2P-03**	16	32	6
1/4"	**KQ2P-07**	18	35	8.5
5/16"	**KQ2P-09**	20.5	39	10
3/8"	**KQ2P-11**	22	43	11.5

⚠ Caution

Mounting screw tightening torques

M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

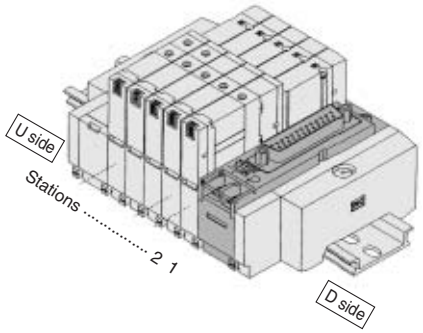
⚠ Warning

When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions in pages 1-6-92 to 1-6-109, and then mount it.

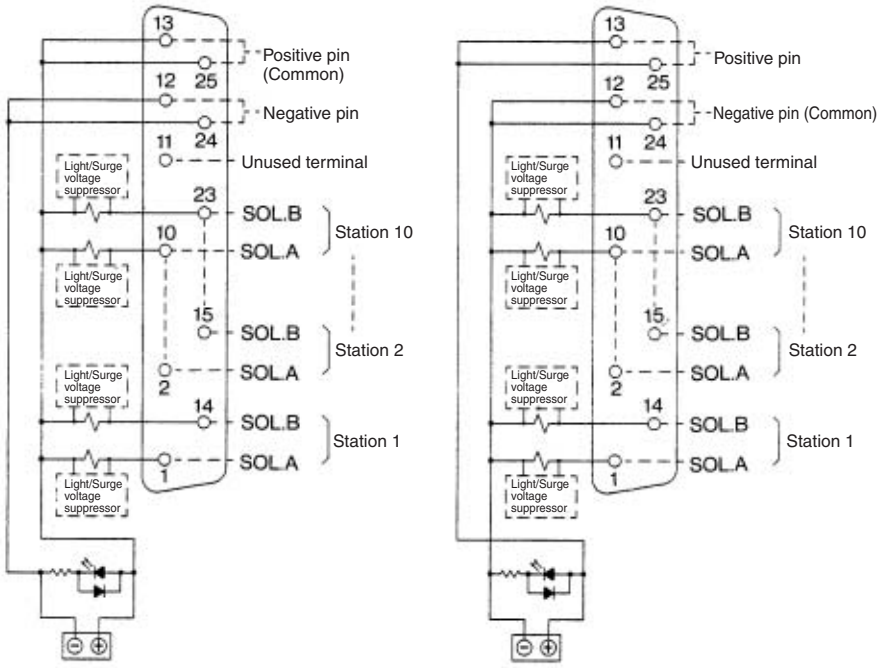
Internal Wiring of Manifold

Type 45(N)F: D-sub Connector

A D-sub connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



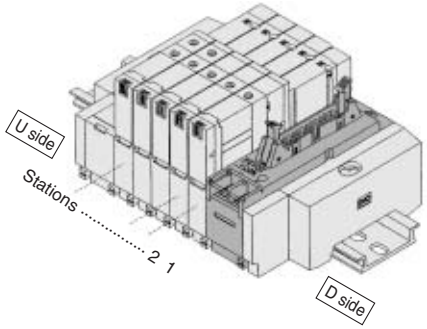
<For positive common (45F)> **<For negative common (45NF)>**



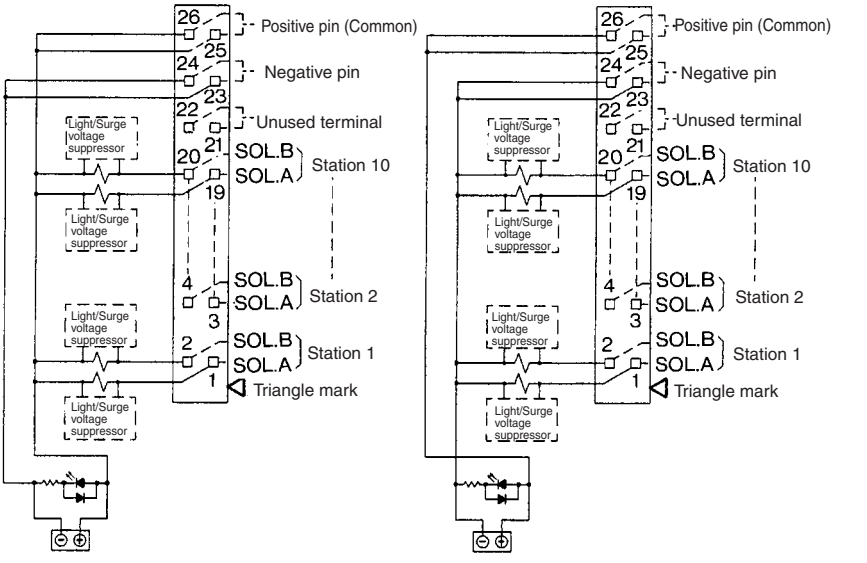
- The power source terminal is used for connecting to an external power source.
- The above diagram is the double wiring specifications for up to 10 stations. When the wiring specifications are specified on the manifold specification sheet, the valve assignment for the connector number will differ from the above diagram. For more information, please contact SMC.
- When using a single solenoid valve, connect wire to SOL.A.
- The maximum number of stations is 20 in terms of manifold bases, as well as solenoids. (Please consult with SMC for more stations.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

Type 45(N)P: Flat Ribbon Cable (26 pins)

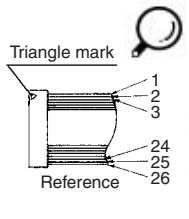
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



<For positive common (45P)> **<For negative common (45NP)>**



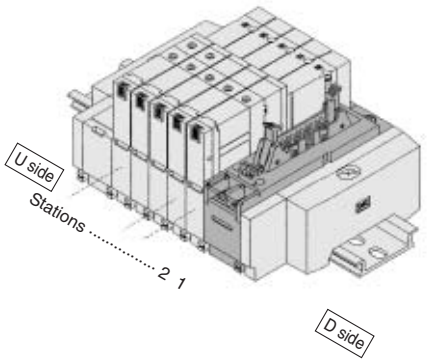
- The power source terminal is used for connecting to an external power source.
- The above diagram is the double wiring specifications for up to 10 stations. When the wiring specifications are specified on the manifold specification sheet, the valve assignment for the connector number will differ from the above diagram. For more information, please contact SMC.
- When using a single solenoid valve, connect wire to SOL.A.
- The maximum number of stations is 20 in terms of manifold bases, as well as solenoids. (Please consult with SMC for more stations.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

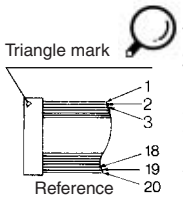


Note)
Terminal no. is not indicated on the connector. The terminal no. indicated in the connection schematic of connector, as shown in the reference, means a correlation of 1, 2, 3···26 from the triangle mark side on the flat ribbon cable of connector.

Type 45(N)PG: Flat Ribbon Cable (20 pins)

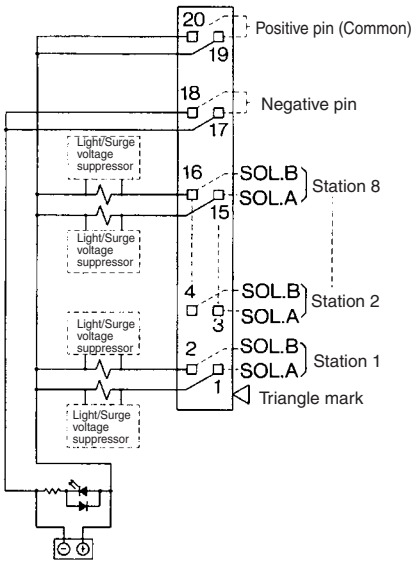
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



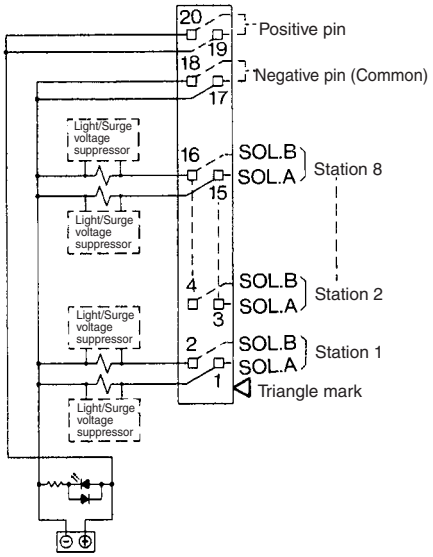


Note)
Terminal no. is not indicated on the connector. The terminal no. indicated in the connection schematic of connector as shown in the reference, means a correlation of 1, 2, 3····20 from the triangle mark side on the flat ribbon cable of connector.

<For positive common (45PG)>



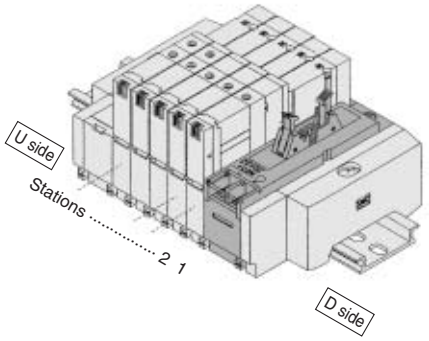
<For negative common (45NPG)>

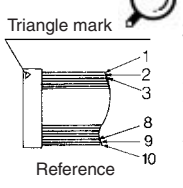


- The power source terminal is used for connecting to an external power source.
- The above diagram is the double wiring specifications for up to 8 stations. When the wiring specifications are specified on the manifold specification sheet, the valve assignment for the connector number will differ from the above diagram. For more information, please contact SMC.
- When using a single solenoid valve, connect wire to SOL.A.
- The maximum number of stations is 16 in terms of manifold bases, as well as solenoids. (Please consult with SMC for more stations.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

Type 45(N)PH: Flat Ribbon Cable (10 pins)

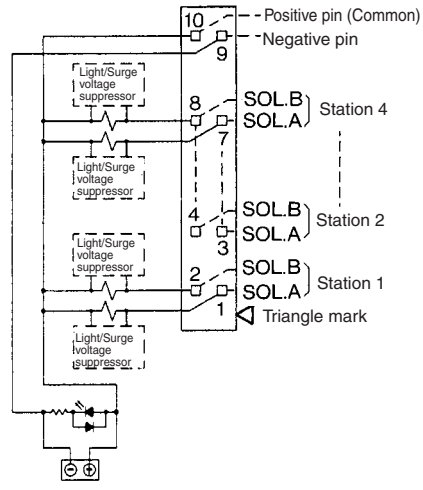
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



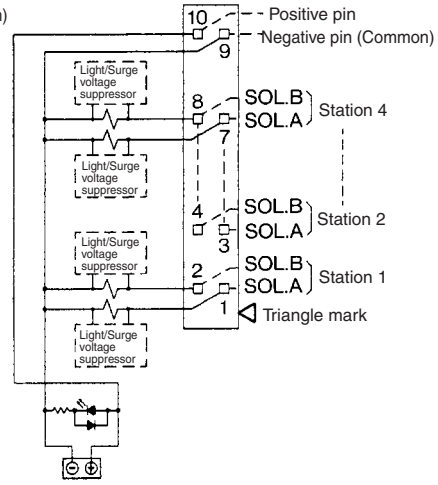


Note)
Terminal no. is not indicated on the connector. The terminal no. indicated in the connection schematic of connector as show in the reference, means a correlation of 1, 2, 3····10 from the triangle mark side on the flat ribbon cable of connector.

<For positive common (45PH)>



<For negative common (45NPH)>

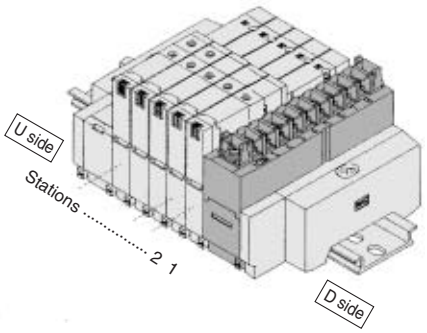


- The power source terminal is used for connecting to an external power source.
- The above diagram is the double wiring specifications for up to 4 stations. When the wiring specifications are specified on the manifold specification sheet, the valve assignment for the connector number will differ from the above diagram. For more information, please contact SMC.
- When using a single solenoid valve, connect wire to SOL.A.
- The maximum number of stations is 8 in terms of manifold bases, as well as solenoids. (Please consult with SMC for more stations.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

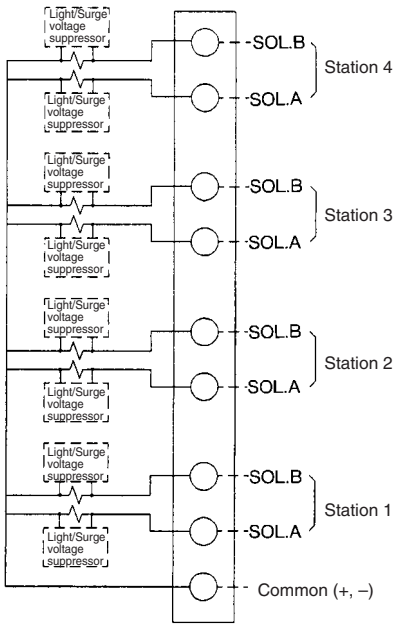
Internal Wiring of Manifold

Type 45T: Terminal Block

A terminal block style permits direct cable connection without treatment of lead wires.

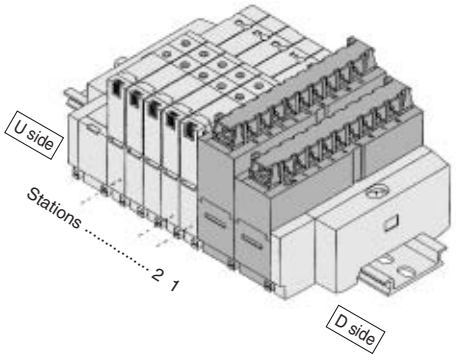


<45T>

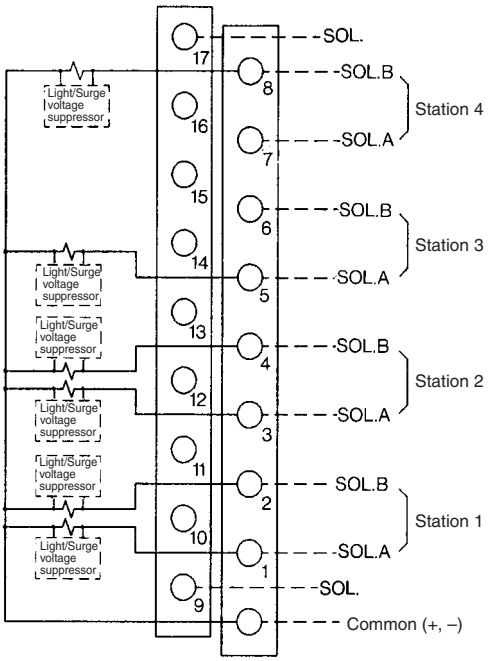


- The maximum number of stations is 8 in terms of manifold bases, as well as solenoids. (Please consult with SMC for more stations.)
- The above diagram is the double wiring specifications for up to 4 stations. When the wiring specifications are specified on the manifold specification sheet, the valve assignment for the connector number will differ from the above diagram. For more information, please contact SMC.
- When using a single solenoid valve, connect wire to SOL.A.
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
- There is no polarity in the COM wiring. Supply positive power for +COM spec. and negative power for –COM spec.

Type 45T1: Terminal Block



<45T1>

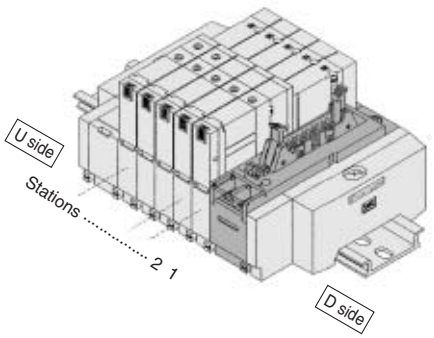


- The maximum number of stations is 17 in terms of manifold bases, as well as solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
- There is no polarity in the COM wiring. Supply positive power for +COM spec. and negative power for –COM spec.

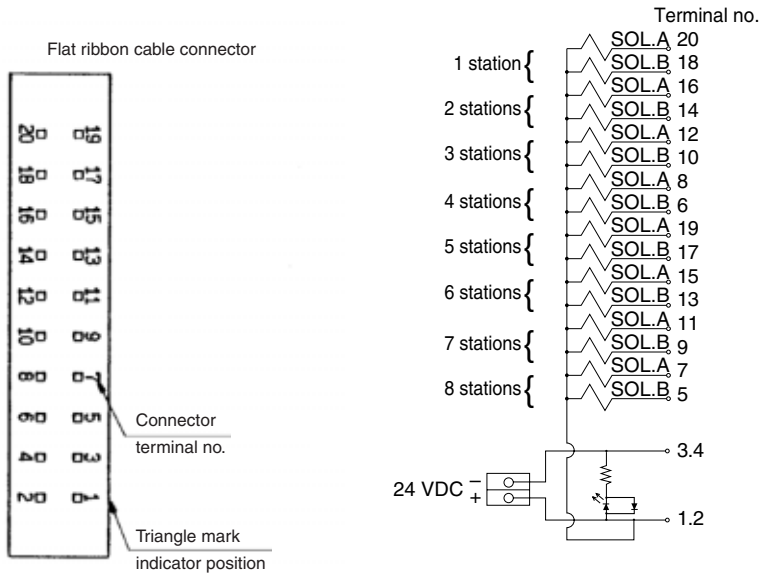
Internal Wiring of Manifold

Type 45G: Flat Ribbon Cable (PC Wiring System compatible)

It is the manifold for 20 pins flat ribbon cable connector which is compliant for PC wiring system.



Electric circuit diagram (Below wiring is the case of all double solenoid connections.)



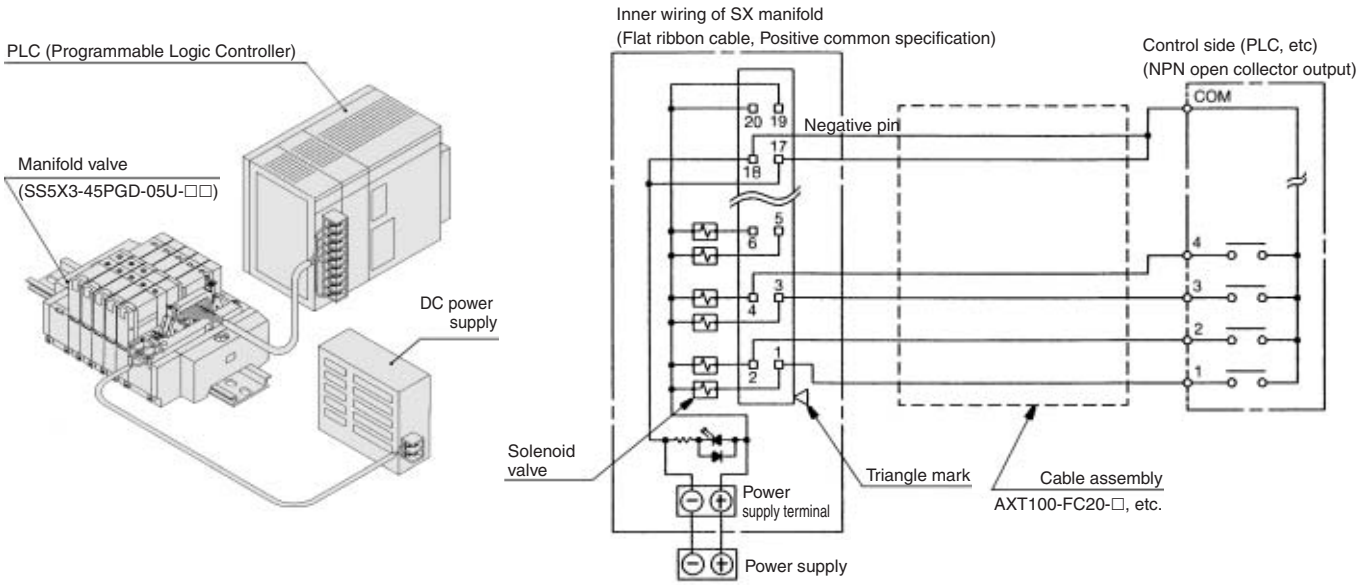
- The maximum number of stations is 16 in terms of manifold bases, as well as solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

Refer to the separate catalog CAT.S02-20 for the details of PC Wiring System.

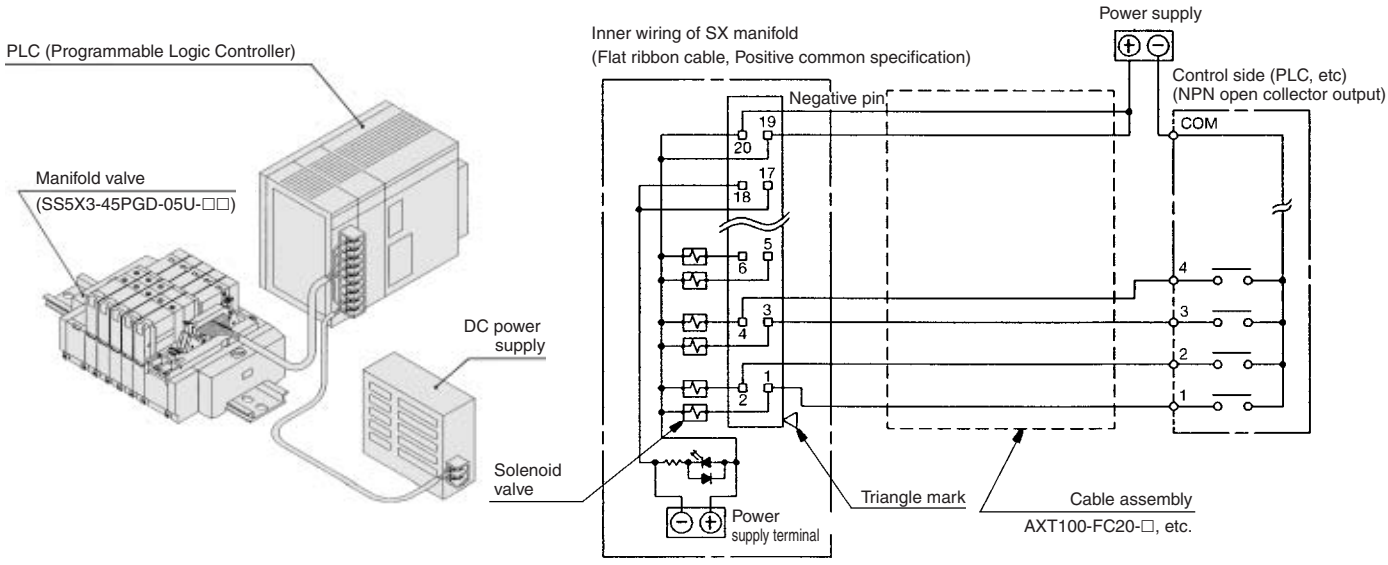
SS5X□-45□ Wiring of Plug-in Type

Power terminal is equipped with plug-in manifold of Series SX as standard.
Power terminal enables the power supply to valve from either of manifold or controller side.

1. Wiring example when using manifold power supply terminals



2. Wiring example when the power terminal of the manifold is not used (Power supplied at controller or in wiring)

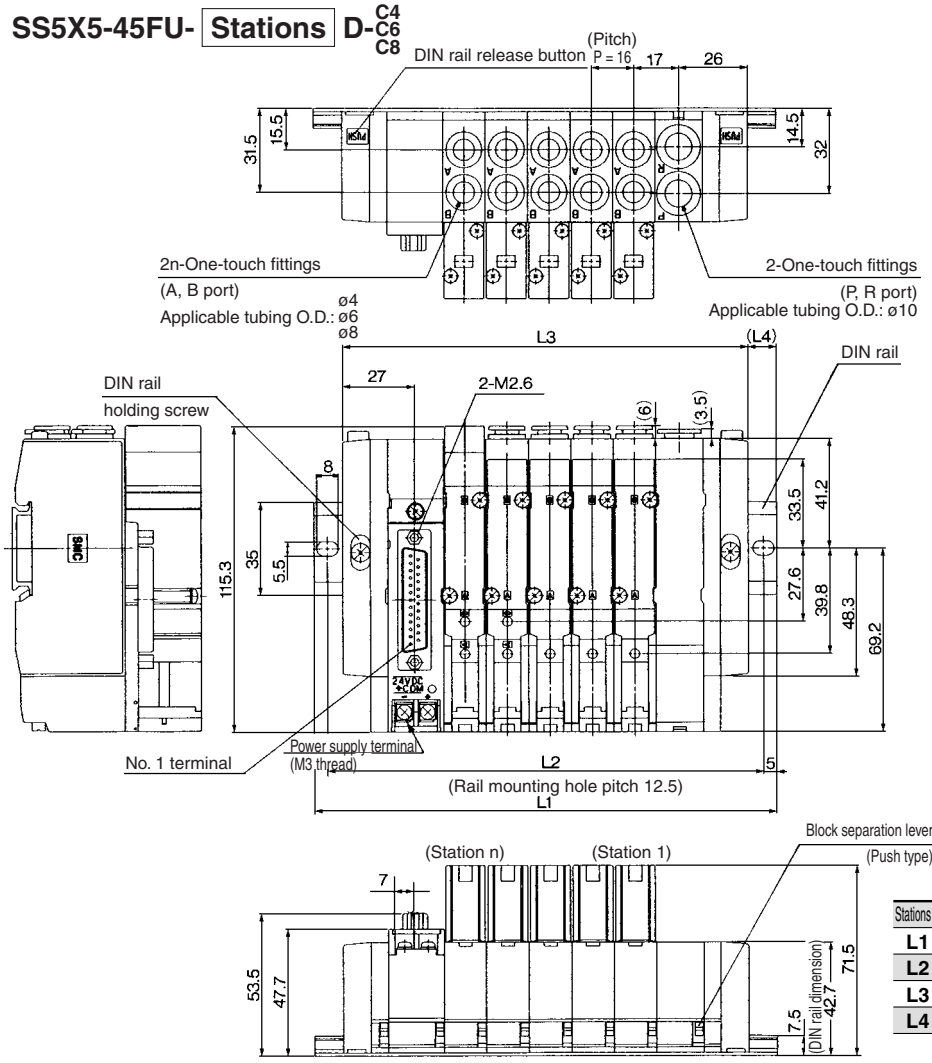


⚠ Caution

- Single wire, COM position, etc. of PLC are different from each manufacturer. When connecting with PLC, read the specifications carefully and understand the electrical circuit. Poor wiring could cause damage to PLC, power source, etc. as well as manifold and valve.

SX5000: D-sub Connector/Plug-in

SS5X5-45FU- Stations D-C4 C6 C8

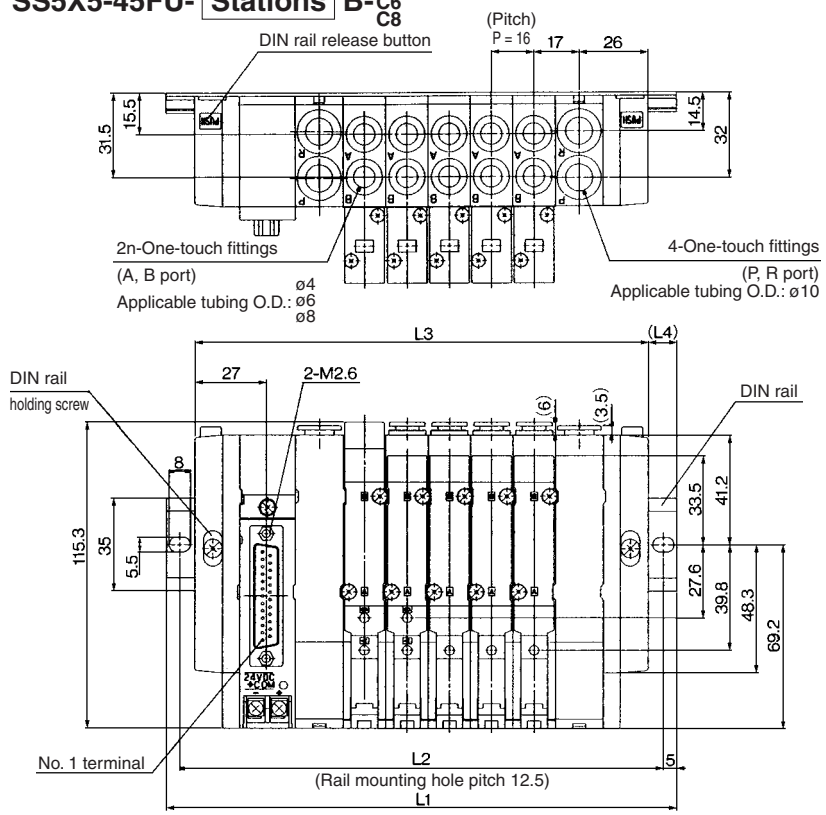


Note) The L1 to L4 dimensions of SS5X5-45FU-Stations U-□ are identical to those of SS5X5-45FU-Stations D-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5X5-45FU- Stations B-C4 C6 C8

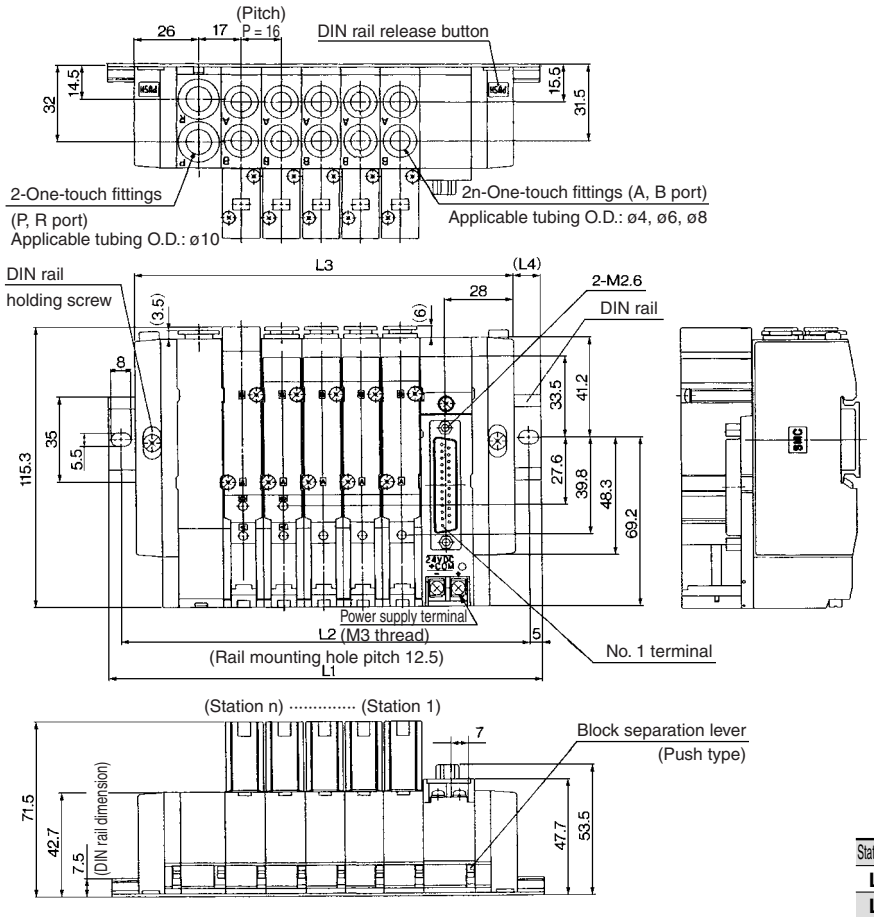


(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	288	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SS5X5-45FD- Stations U-C4 C6 C8

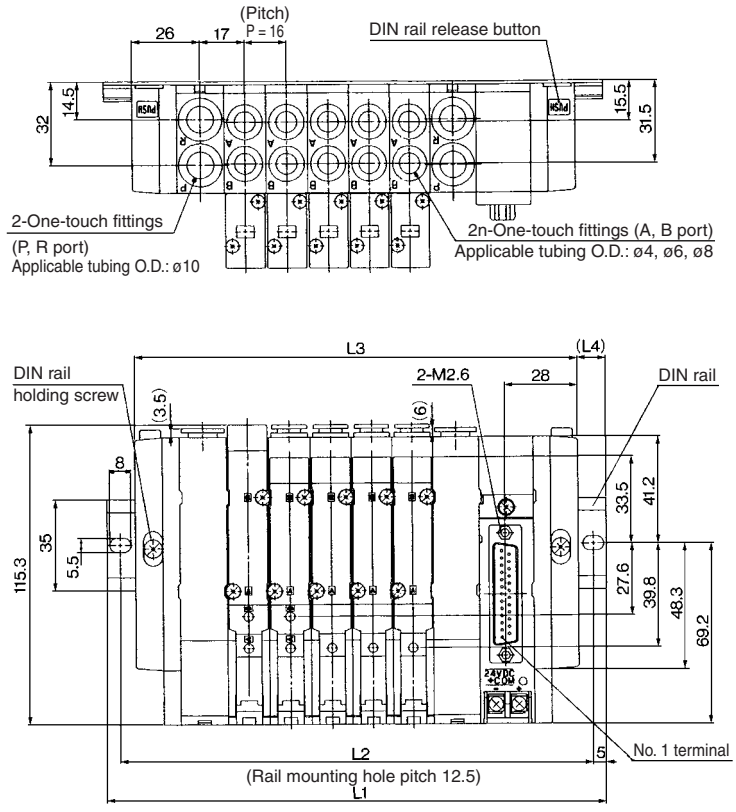


Note) The L1 to L4 dimensions of SS5X5-45FD- Stations D-□ are identical to those of SS5X5-45FD- Stations U-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5X5-45FD- Stations B-C4 C6 C8



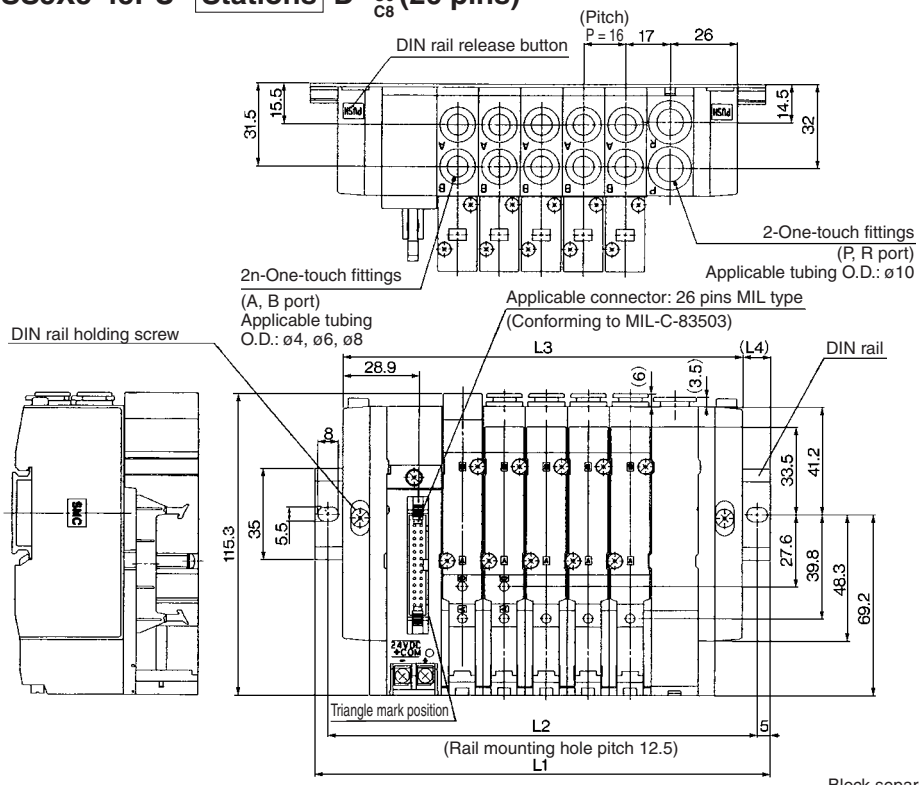
(mm)

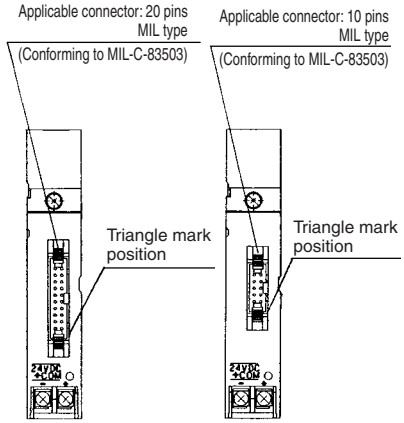
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	288	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

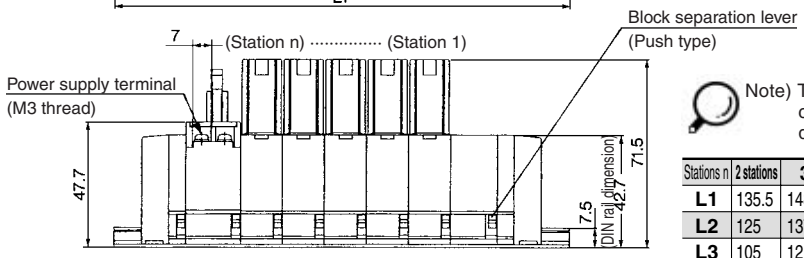
SX5000: Flat Ribbon Cable Type/Plug-in

SS5X5-45PU- Stations D- C4 C6 C8 (26 pins)





45PG (20 pins) 45PH (10 pins)

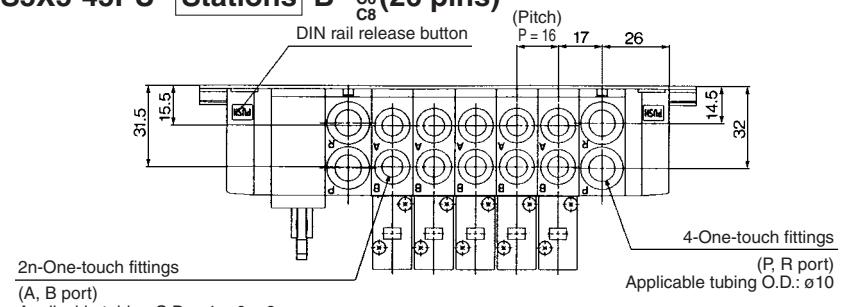


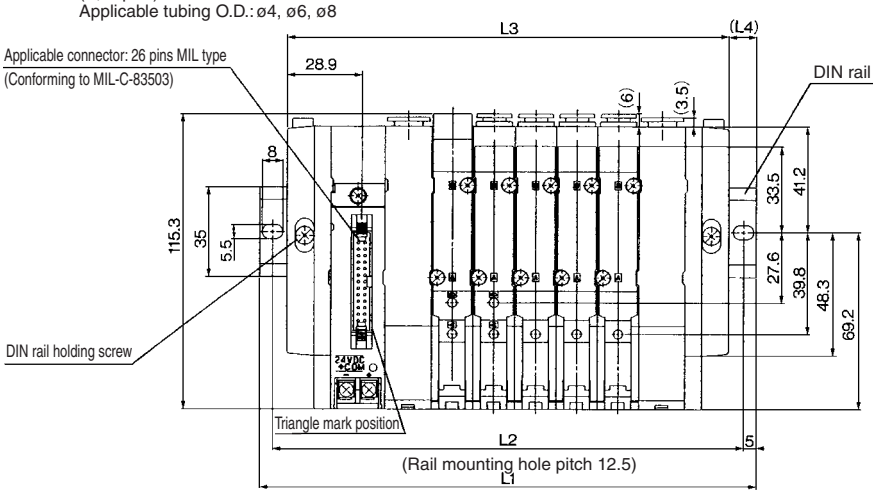
Note) Types 45PG and 45PH differ only in their connectors, and the L1 through L4 dimensions are the same as type 45P.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5X5-45PU- Stations B- C4 C6 C8 (26 pins)



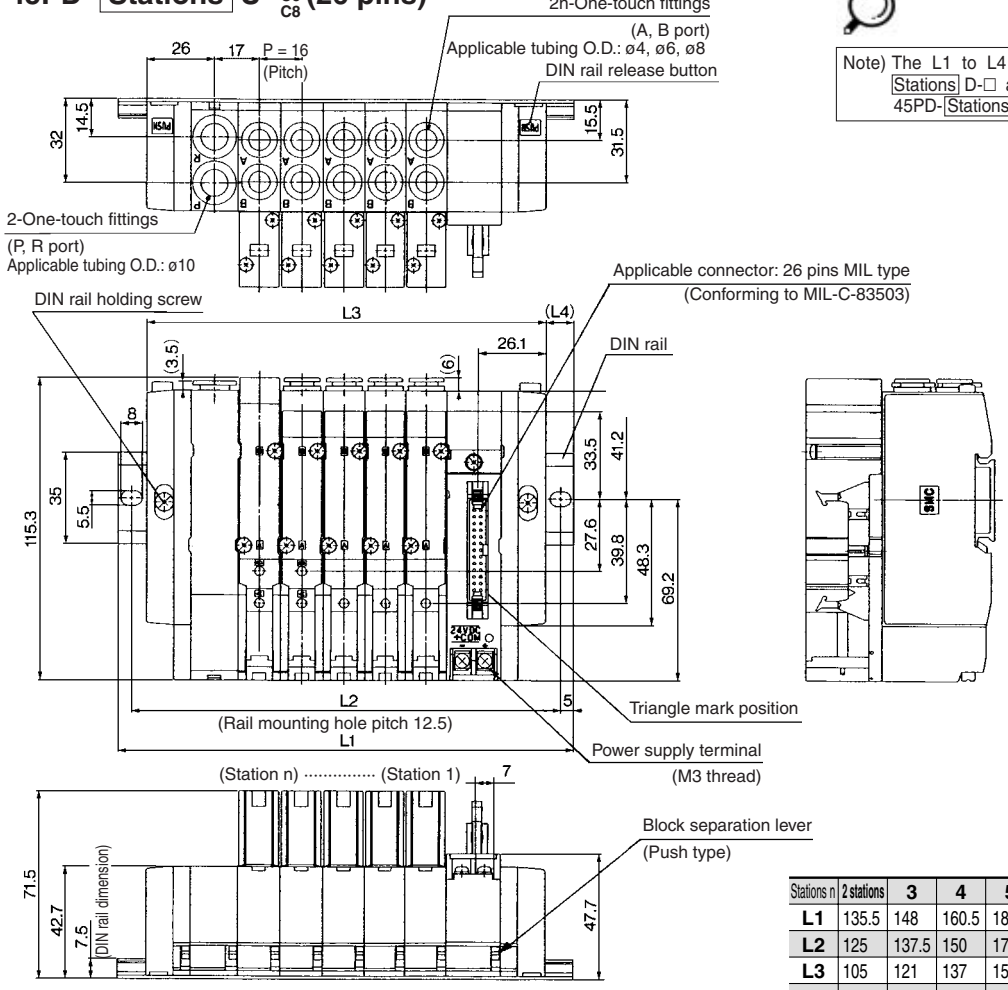


(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	288	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SS5X5-45PD- Stations U- C4 C6 C8 (26 pins)

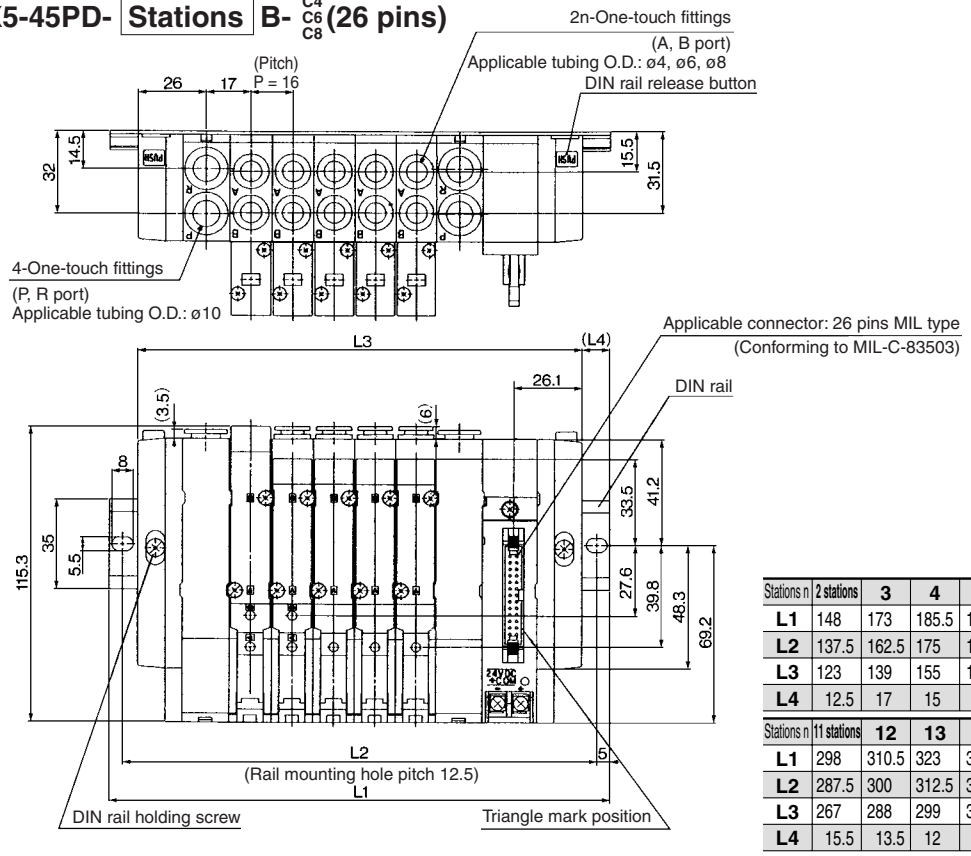


Note) The L1 to L4 dimensions of SS5X5-45P□D-Stations D-□ are identical to those of SS5X5-45PD-Stations U-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5X5-45PD- Stations B- C4 C6 C8 (26 pins)



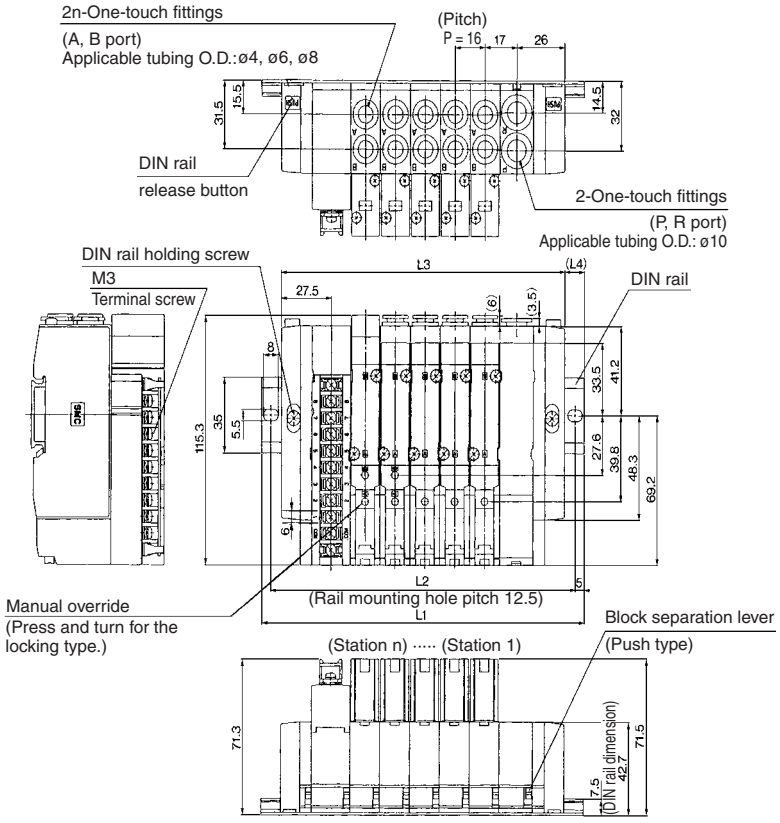
(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	288	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SX5000: 9 Pins Terminal Block/Plug-in

SS5X5-45TU- Stations D- C4 C6 C8

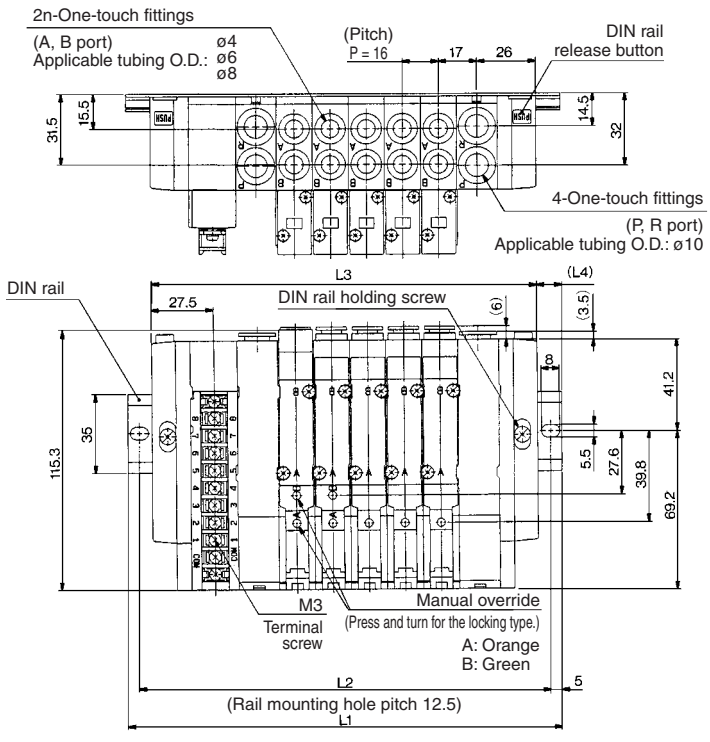


Note) The L1 to L4 dimensions of
SS5X5-45TU- Stations U-□,
SS5X5-45TD- Stations U-□,
SS5X5-45TU- Stations D-□,
are identical to those of SS5X5-45TU- Stations D-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5
L2	125	137.5	150	175	187.5	200	225
L3	105	121	137	158	169	185	201
L4	15	13.5	11.5	16	14.5	125	17

SS5X5-45TU- Stations B- C4 C6 C8



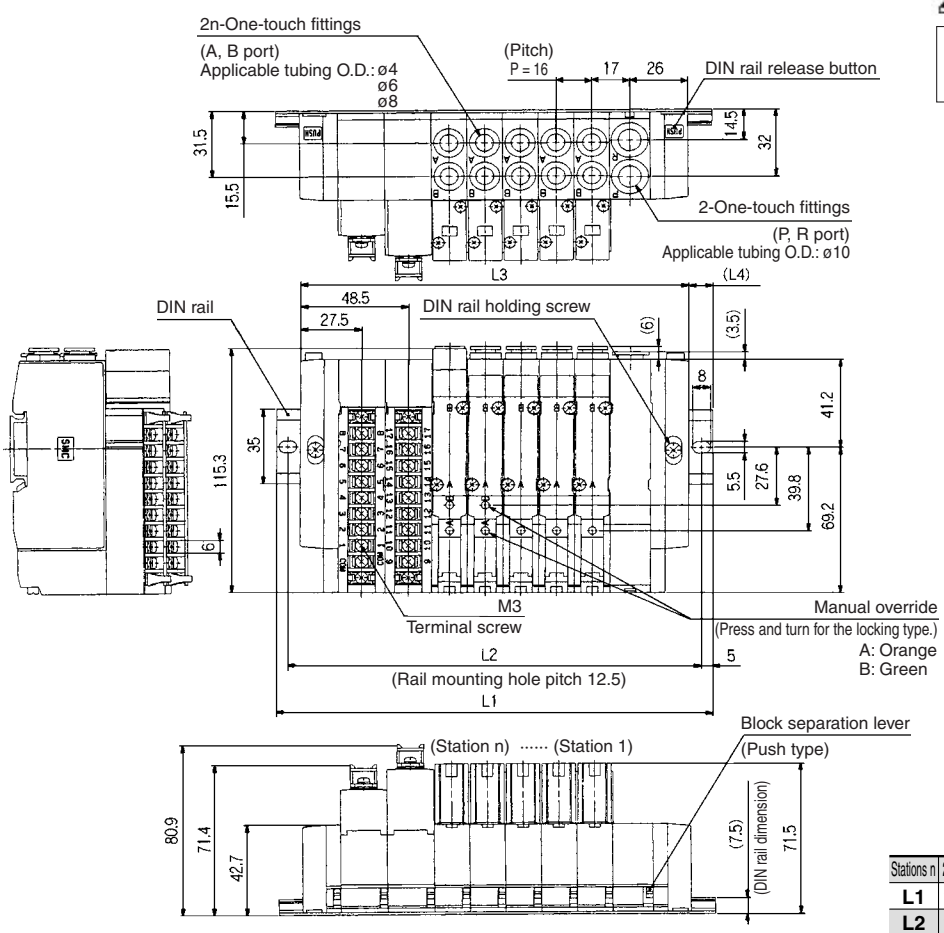
Note) The L1 to L4 dimensions of SS5X5-45TD- Stations B-□ are identical to those of SS5X5-45TU- Stations B-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8 stations
L1	148	173	185.5	198	210.5	235.5	248
L2	137.5	162.5	175	187.5	200	225	237.5
L3	123	139	155	171	187	203	219
L4	12.5	17	15	13.5	11.5	16	14.5

SX5000: 18 Pins Terminal Block/Plug-in

SS5X5-45T1U- Stations D- C4 C6 C8 (18 pins)

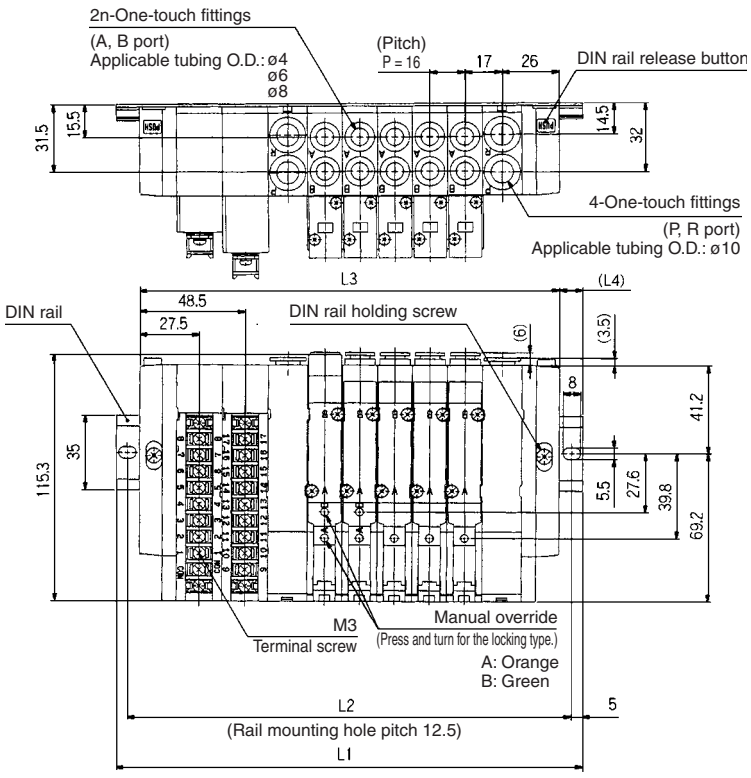


Note) The L1 to L4 dimensions of SS5X5-45T1U-Stations U-□ are identical to those of SS5X5-45T1U-Stations D-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	223	235.5	248	273	285.5
L2	150	162.5	175	187.5	212.5	225	237.5	262.5	275
L3	126	142	158	174	190	206	222	238	254
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

SS5X5-45T1U- Stations B- C4 C6 C8 (18 pins)

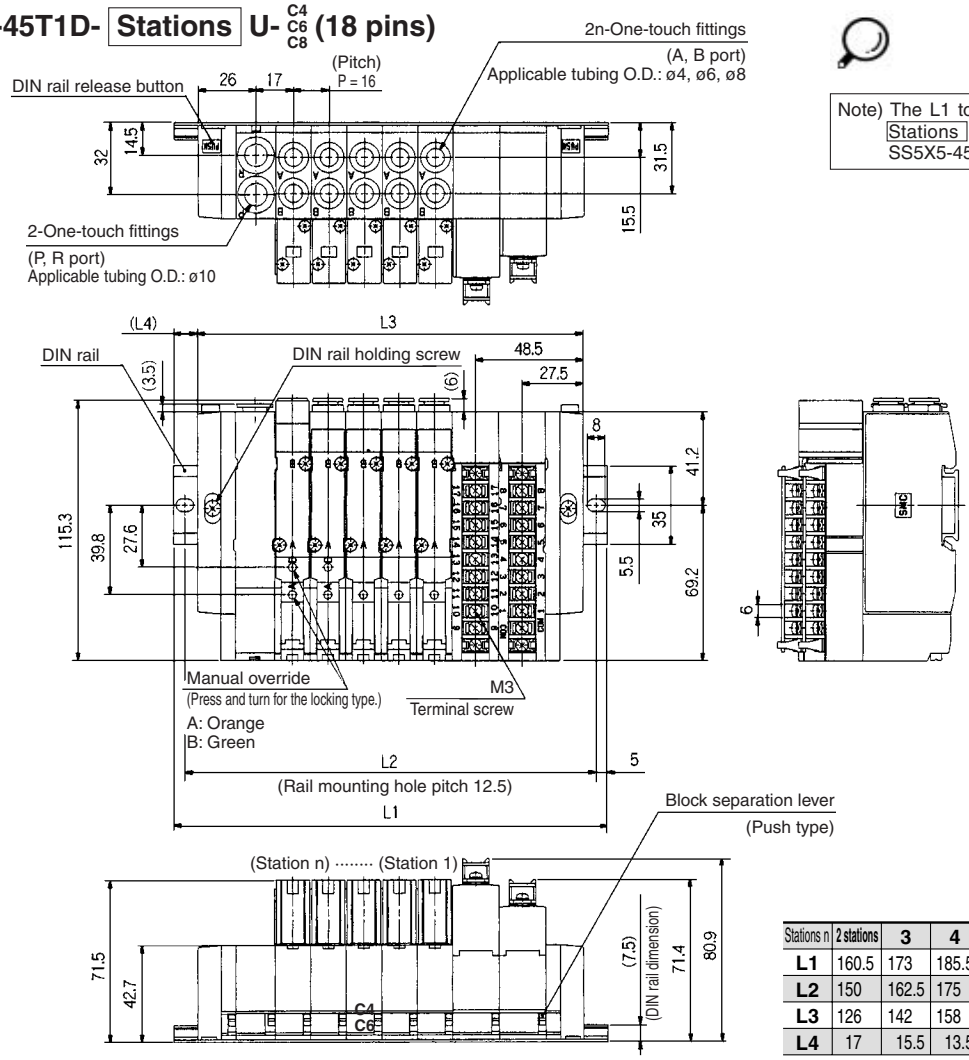


(mm)

Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	173	185.5	210.5	223	235.5	248	273	285.5
L2	162.5	17.5	200	212.5	225	237.5	262.5	275
L3	144	160	176	192	208	224	240	256
L4	14.5	12.5	17	15.5	13.5	12	16.5	14.5

Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	298	323	335.5	348	360.5	385.5	398	410.5
L2	287.5	312.5	325	337.5	350	375	387.5	400
L3	272	288	304	320	336	352	368	384
L4	13	17.5	15.5	14	12	16.5	15	13

SS5X5-45T1D- Stations U- C4 C6 C8 (18 pins)

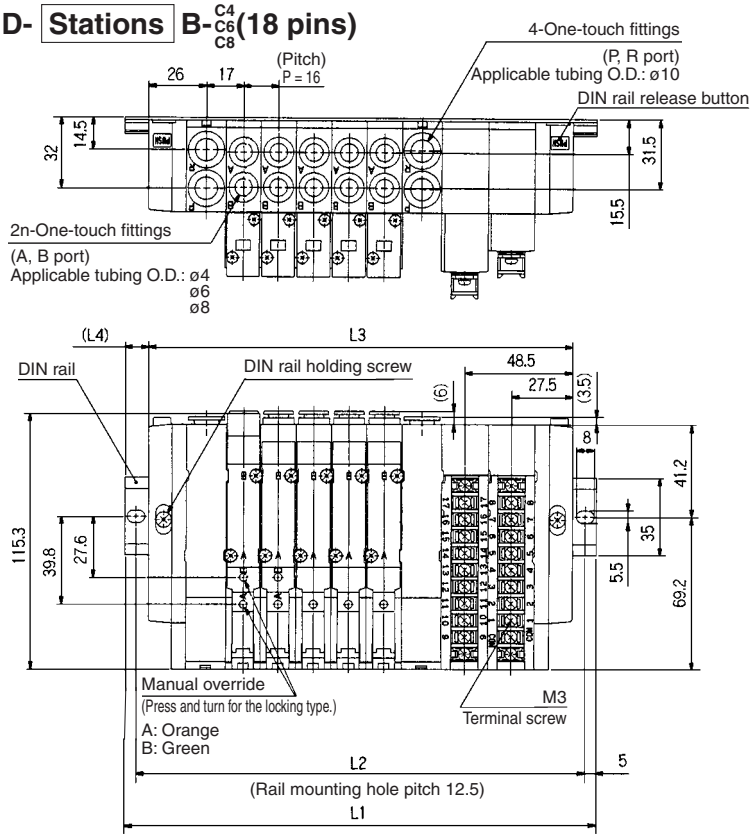


Note) The L1 to L4 dimensions of SS5X5-45T1D-Stations D-□ are identical to those of SS5X5-45T1D-Stations U-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	223	235.5	248	273	285.5
L2	150	162.5	175	187.5	212.5	225	237.5	262.5	275
L3	126	142	158	174	190	206	222	238	254
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

SS5X5-45T1D- Stations B- C4 C6 C8 (18 pins)



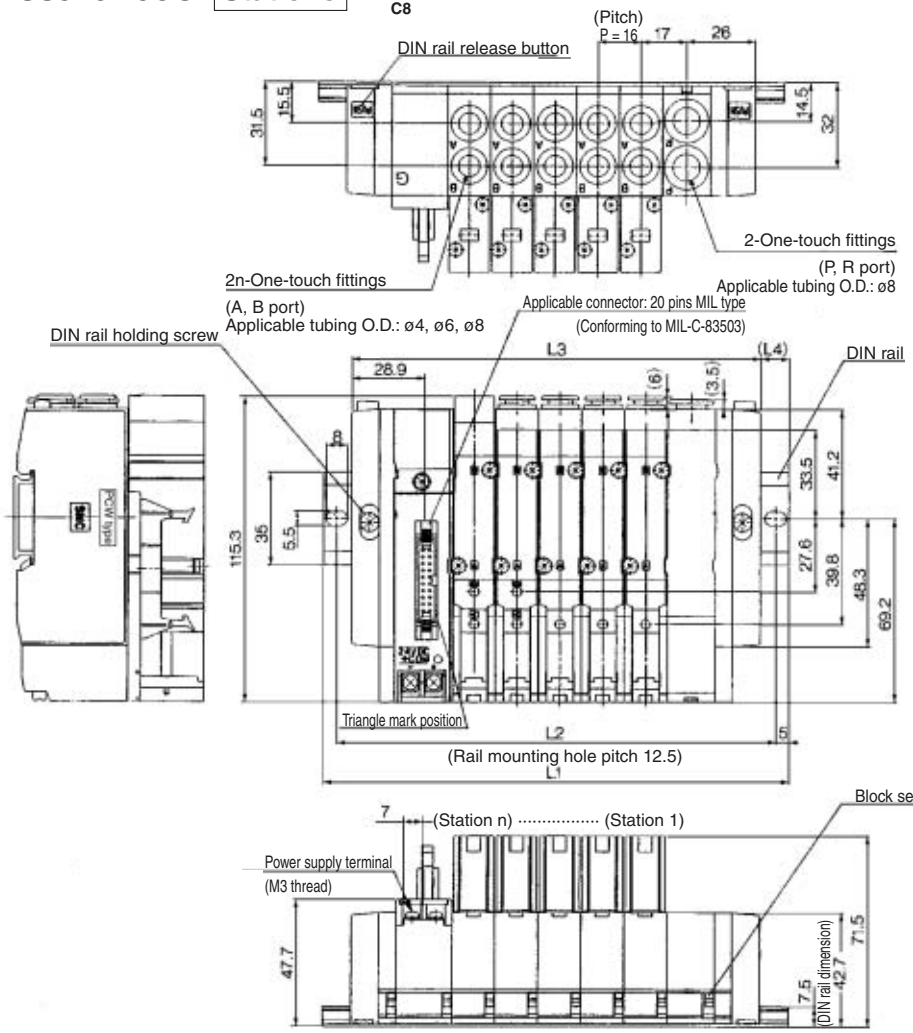
(mm)

Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	173	185.5	210.5	223	235.5	248	273	285.5
L2	162.5	17.5	200	212.5	225	237.5	262.5	275
L3	144	160	176	192	208	224	240	256
L4	14.5	12.5	17	15.5	13.5	12	16.5	14.5

Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	298	323	335.5	348	360.5	385.5	398	410.5
L2	287.5	312.5	325	337.5	350	375	387.5	400
L3	272	288	304	320	336	352	368	384
L4	13	17.5	15.5	14	12	16.5	15	13

SX5000: PC Wiring System Compatible (Flat ribbon cable type/Plug-in)

SS5X5-45GU- Stations D- C4 C6 C8

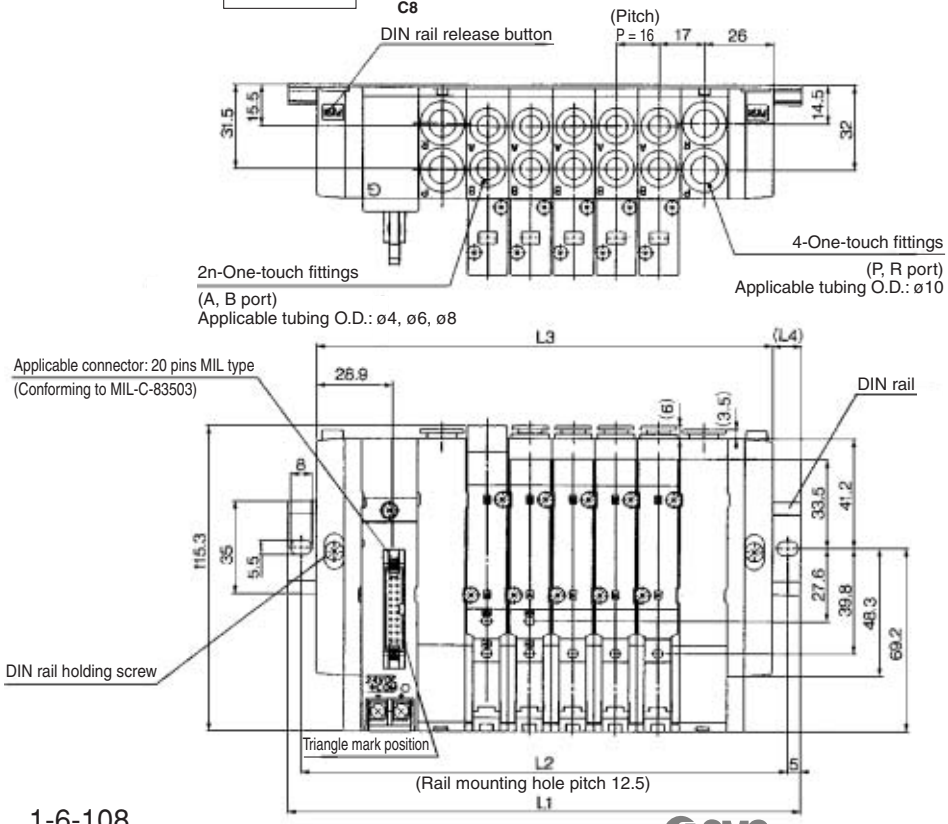


(mm)

Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

Note) The L1 to L4 dimensions of SS5X5-45GU-Stations U-□ are identical to those of SS5X5-45GU-Stations D-□.

SS5X5-45GU- Stations B- C4 C6 C8

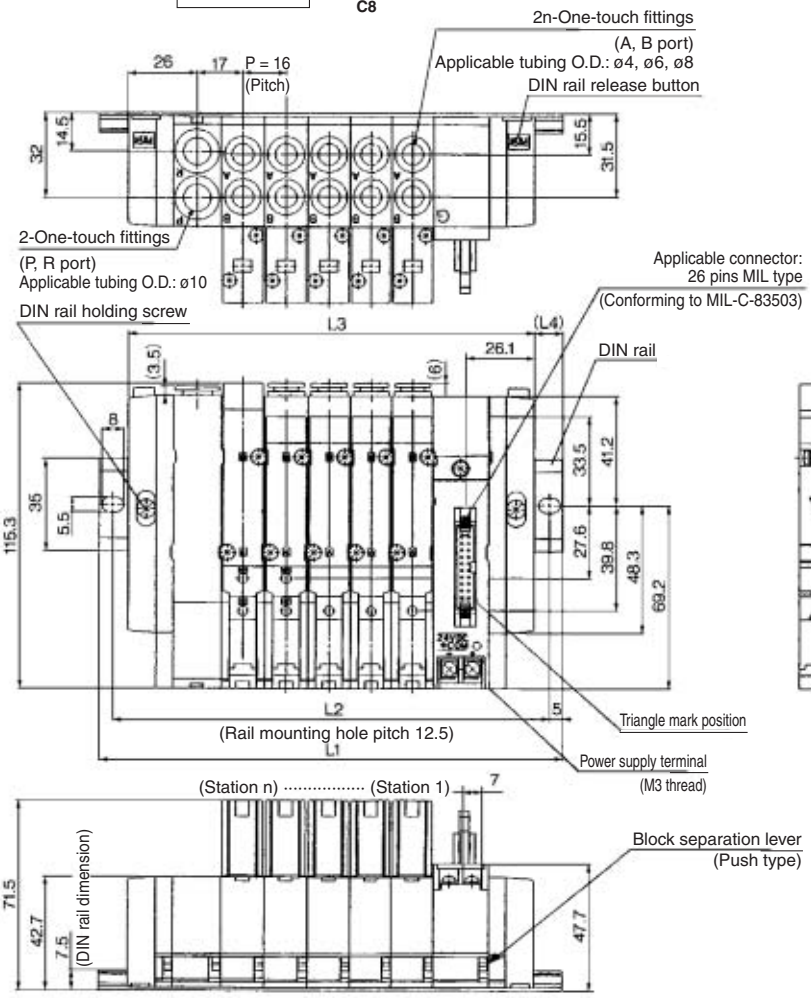


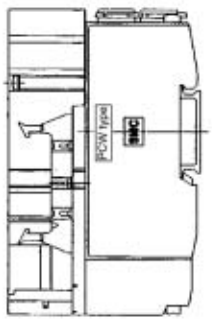
(mm)

Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations	11 stations	12	13	14	15	16 stations
L1	298	310.5	323	348	360.5	373
L2	287.5	300	312.5	337.5	350	362.5
L3	267	283	299	315	331	347
L4	15.5	13.5	12	16.5	14.5	13

SS5X5-45GD- Stations U- C4 C6 C8



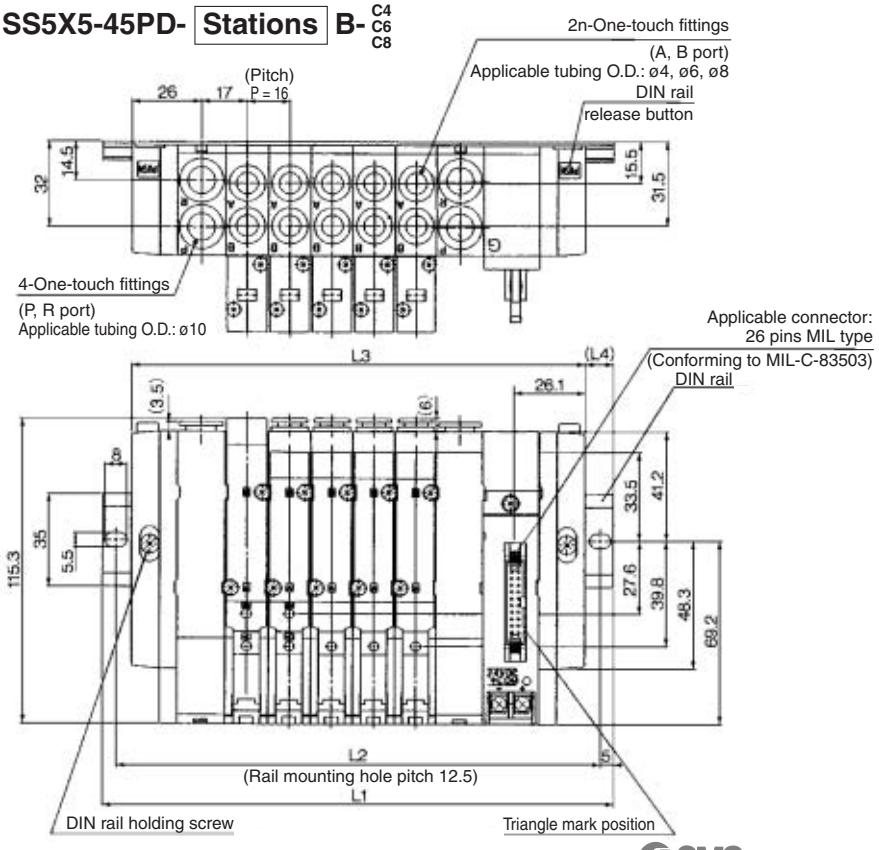


Note) The L1 to L4 dimensions of SS5X5-45GD-Stations D-□ are identical to those of SS5X5-45GD-Stations U-□.

(mm)

Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5X5-45PD- Stations B- C4 C6 C8



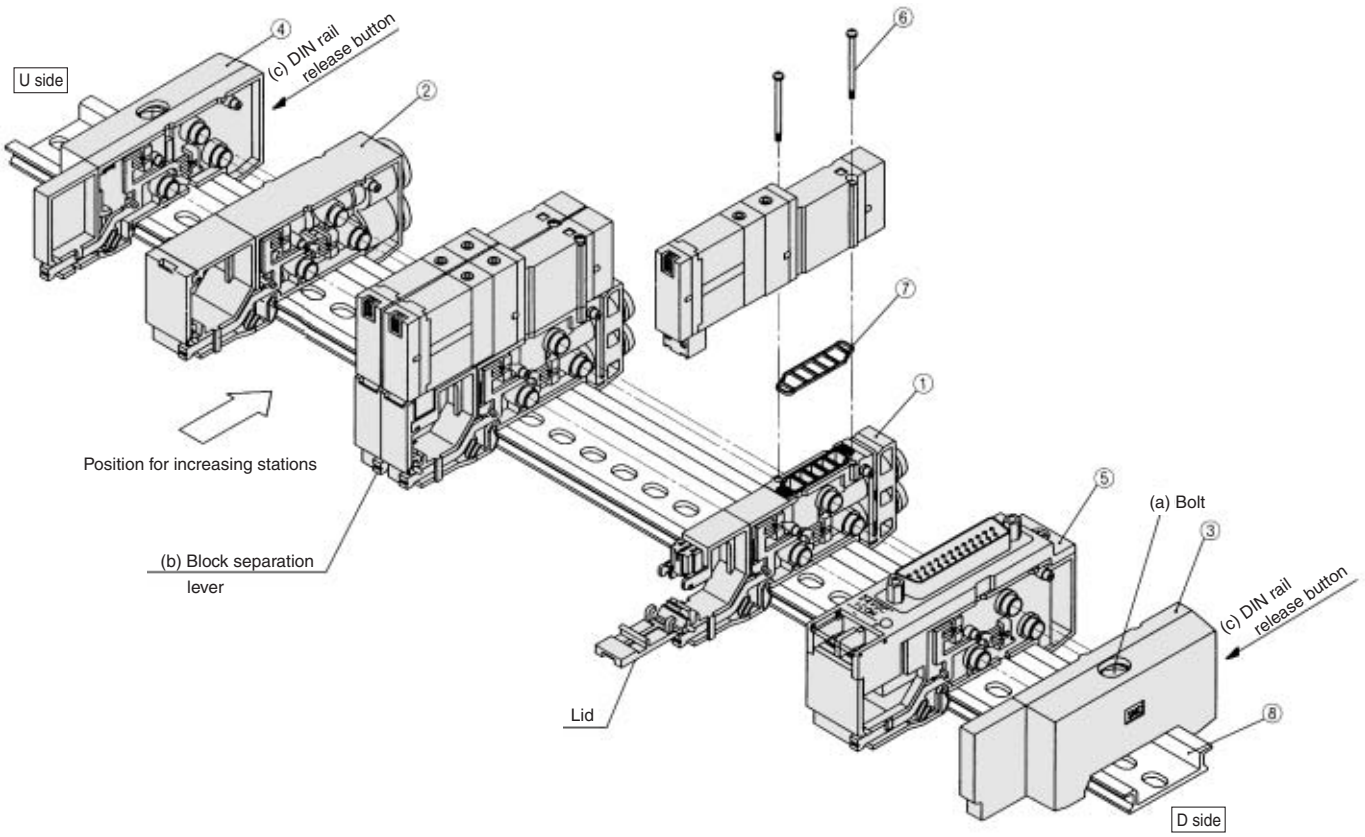
(mm)

Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations	11 stations	12	13	14	15	16 stations
L1	298	310.5	323	348	360.5	373
L2	287.5	300	312.5	337.5	350	362.5
L3	267	283	299	315	331	347
L4	15.5	13.5	12	16.5	14.5	13

Exploded View: DIN Rail Manifold

Type 45F (D-sub connector type) Manifold



Replacement Parts

No.	Description	Part no.		Note	
		SX3000	**SX5000**		
①	Manifold block assembly	Manifold block assembly number differs according to an attached lead wire assembly based on the connector specification (Single, Double). Select an appropriate part number from among the manifold block assembly numbers shown below.			
②	SUP/EXH block assembly	(Metric size) SX3000-51-2A (Inch size) SX3000-51-16A	(Metric size) SX5000-51-2A (Inch size) SX5000-51-16A	R, P port SX3000 (Metric size): With One-touch fittings for ø8 (Inch size): With One-touch fittings for ø5/16" R, P port SX5000 (Metric size): With One-touch fittings for ø10 (Inch size): With One-touch fittings for ø3/18"	
③	End block assembly	SX3000-52-2A	SX5000-52-2A	For D side	
④	End block assembly	SX3000-53-2A	SX5000-53-2A	For U side	
⑤-1	Connector block assembly (For D-sub connector)	SX3000-64-$^{1A}_{1NA}$	SX5000-64-$^{1A}_{1NA}$	-1A: +COM -1NA: –COM	Note) 24 VDC
⑤-2	Connector block assembly (For 26 pins flat cable)	SX3000-64-$^{2A}_{2NA}$-26	SX5000-64-$^{2A}_{2NA}$-26	-2A: +COM. -2NA: –COM.	
⑤-3	Connector block assembly (For 20 pins flat cable)	SX3000-64-$^{2A}_{2NA}$-20	SX5000-64-$^{2A}_{2NA}$-20		
⑤-4	Connector block assembly (For 10 pins flat cable)	SX3000-64-$^{2A}_{2NA}$-10	SX5000-64-$^{2A}_{2NA}$-10		
⑤-5	Connector block assembly (For 2 to 8 stations (T, T1) terminal block)	SX3000-64-3A	SX5000-64-3A	In common between +COM and –COM.	
⑤-6	Connector block assembly (For 9 to 17 stations (T1) terminal block)	SX3000-64-8A	SX5000-64-8A		
⑥	Round head combination screw	SX3000-22-2 (M2 x 24)	M3 x 30 (Matt nickel plated)		
⑦	Gasket	SX3000-57-4	SX5000-57-6		
⑧	DIN rail	VZ1000-11-1-□		Refer to page 1-6-77.	

Note) The numbers ⑤–1 to 4 are for 24 VDC. For 12 VDC, suffix -12V to the parts no.
(Example) SX3000-64-1A-12V

Manifold Block Assembly Part No.

Style of manifold	Wiring specifications	Manifold block assembly part no.	Note
For 45(N)F (D-sub connector)	Double	SX$^{3}_{5}$000-50-2A-□□	□□: • SX3000 (Metric size) (Inch size) C4: With One-touch fitting for ø4 N3: With One-touch fitting for ø5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø1/4" X5000 (Metric size) (Inch size) C4: With One-touch fitting for ø4 N3: With One-touch fitting for ø5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø1/4" C8: With One-touch fitting for ø8 N9: With One-touch fitting for ø5/16" (Gasket ⑦ supplied as an accessory.)
	Single	SX$^{3}_{5}$000-50-3A-□□	
For 45(N) $^{P}_{PG}$ $_{PH}$ (Flat ribbon cable)	Double	SX$^{3}_{5}$000-50-4A-□□	
	Single	SX$^{3}_{5}$000-50-5A-□□	
For 45 $^{T}_{T1}$ (Terminal block)	Double	SX$^{3}_{5}$000-50-6A-□□	
	Single	SX$^{3}_{5}$000-50-7A-□□	

How to Increase Manifold Bases

(1) Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail release button (c), separate the manifold base from the DIN rail.)

(2) Additional bases are to be added to the U side. Press splitting button (b) of the manifold block assembly on the U side until button (b) locks, and then separate the block assemblies.

(3) Separate the connector block assembly in the same manner as 2, and remove the connector mounting screw shown in Fig. (1).

(4) Loosen the valve mounting screw on the U side, remove the valve, and take out the receptacle housing. (Refer to Fig. (2).)

(5) Insert the common wire (red) of the manifold block assembly to be added into the pin insertion section (N mark) of the receptacle housing that was taken out in 4, mount it on the manifold block, and mount the removed valve.

(6) As shown in Fig. (3), mount the additional manifold block assembly on the DIN rail on the U side. Refer to the circuit diagram, and insert the lead wire (SOL.A: Black, SOL.B: White) as shown in Fig. (4).

(7) Press the blocks against each other until a click sound is produced, place the lead wire in the manifold block, and close the lid without pinching the lead wire.

(8) While lightly holding the blocks together so that there are no gaps between them, secure them to the DIN rail by tightening the screws A. (Tightening torque: 1.4 N·m)

⚠ Caution

1. Depending on the connector, there is a limit to the number of solenoids. When all manifold stations are wired for double solenoid valves, expansion of the manifold may not be possible. Please consult with SMC for more information.
2. The manifold block assembly mounting position for additional manifold bases is always on the U side, because wires are connected to respective connectors sequentially from the D side.
3. When bolt (a) for the end block is not sufficiently tightened during reassembly, air leakage may result. Before supplying air, check that there is no gap between blocks and that the manifold block is firmly fixed to the DIN rail in order to ensure air supply without leakage.

Fig. (1)

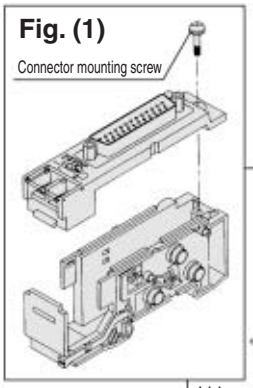


Fig. (2)

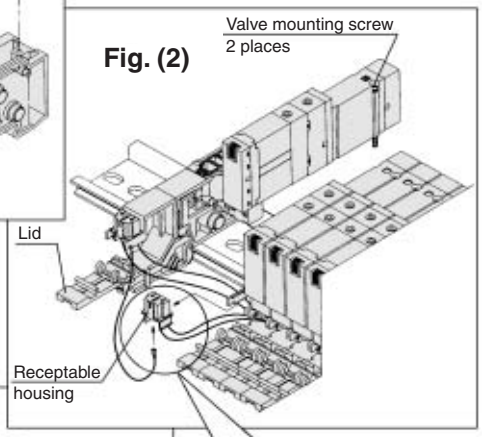
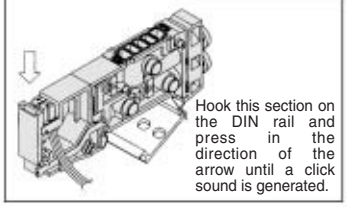


Fig. (3)



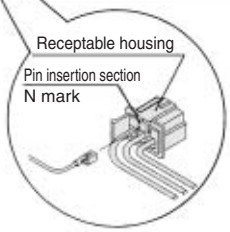
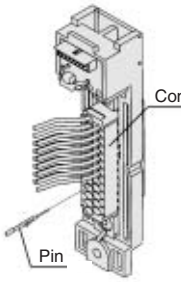


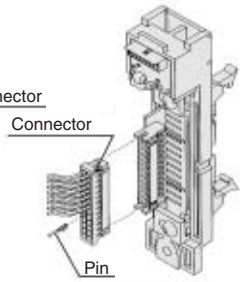
Fig. (4)

D-sub connector (45F)



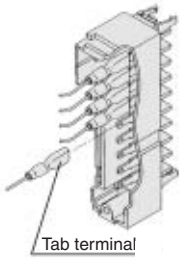
Note) After inserting pins, pull lead wires lightly to check that the pins are locked.

Flat ribbon cable (45P□)



Note) Insert pins after removing the connector from the main unit. After inserting pins, pull lead wires lightly to check that the pins are locked.

Terminal block (45T)



Note) Insert tab terminals completely.

How to Change Fitting Assembly

Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly.
After removing the valve, remove the clip with a screwdriver. To mount a new fitting assembly insert it and then insert a clip so it does not come out of the manifold block.

Fitting Assembly Part No.

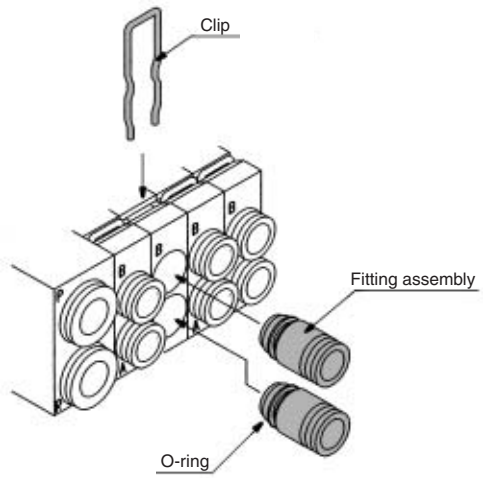
Metric size

SX3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SX5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8

Inch size

SX3000	One-touch fitting for ø5/32"	VVQ1000-50A-N3
	One-touch fitting for ø1/4"	VVQ1000-50A-N7
SX5000	One-touch fitting for ø5/32"	VVQ1000-51A-N3
	One-touch fitting for ø1/4"	VVQ1000-51A-N7
	One-touch fitting for ø5/16"	VVQ1000-51A-N9

Note 1) P and R ports cannot be changed.
Note 2) Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.



Type 45S□

Series ***SX3000/5000***

Base Mounted Manifold
Stacking Type DIN Rail Mounted
Serial Transmission Type (Integrated)

How to Order Manifold

SS5X 3 – 45S A – 05 U – 05 □

Series

3	SX3000
5	SX5000

SI unit

Symbol	Specifications
O	Without SI unit
A	With general type SI unit (Series EX300)
B	Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System
C	OMRON Corp.: SYSBUS Wire System
D	SHARP Corp.: Satellite I/O Link System
E	Matsushita Electric Works: MEWNET-F System
F1	NKE Corp.: Uni-wire System (16 output points)
G	Rockwell Automation: Allen Bradley Remote I/O (RIO) System
H	NKE Corp.: Uni-wire H System
J1	SUNX Corp.: S-LINK System (16 output points)
J2	SUNX Corp.: S-LINK System (8 output points)
K	Fuji Electric Co.: T-LINK Mini System
Q	DeviceNet, CompoBus/D (OMRON Corp.)
R1	OMRON Corp.: CompoBus/S System (16 output points)
R2	OMRON Corp.: CompoBus/S System (8 output points)
U	JEMANET (JPCN-1)
V	Mitsubishi Electric Corp.: CC-LINK System

- For the general purpose type, a transmission unit is required on the CPU side.
- Even though when it is not equipped with SI unit, DIN rail length is long enough for future expectancy of mounting SI unit.

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications
⋮	⋮	
08	8 stations	
02	2 stations	Applicable up to 16 solenoids. Use the manifold specification sheet to specify the wiring specifications.
⋮	⋮	
16	16 stations	

- This also includes the number of blanking plate assemblies.
- When special wiring is required on manifold with 2 to 8 stations, please use the manifold specification sheet.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations maximum)

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

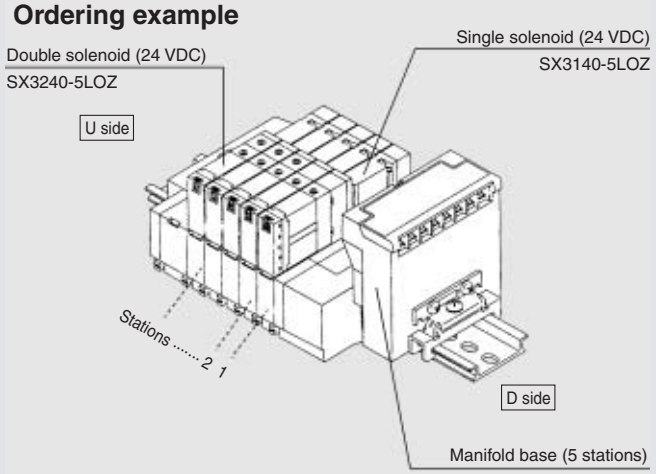
(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example



SS5X3-45SA-05U-C6····1 set (45S with serial 5-station manifold base no.)
∗SX3140-5LOZ·····2 sets (Single solenoid part no.)
∗SX3240-5LOZ·····3 sets (Double solenoid part no.)

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

- They will be assembled in the order listed starting at the first station at the D side whether the connector box is located at either end. When ordering with the double wiring specification, specify it in order, beginning with the 1 station on the D side.
- For manifolds with more than 8 stations (9 to 16), special wiring is required. Please use the manifold specification sheet.
- Serial unit can be mounted on D side only.

How to Order Valves

SX 3 2 40 – 5 LOZ □

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

5	24 VDC

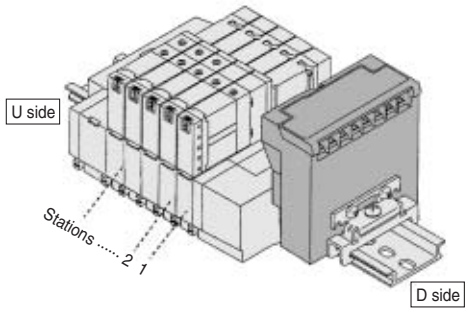
Manual override

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

SI Unit Part No.

Symbol	Specifications	For SS5X□-45S	Symbol	Specifications	For SS5X□-45S
A	With general type SI unit (Series EX300)	EX322-S001	J1	SUNX Corp.: S-LINK System (16 output points)	EX122-SSL1
B	Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System	EX122-SMB1	J2	SUNX Corp.: S-LINK System (8 output points)	EX122-SSL2
C	OMRON Corp.: SYSBUS Wire System	EX122-STA1	K	Fuji Electric Co.: T-LINK Mini System	EX122-SFU1
D	SHARP Corp.: Satellite I/O Link System	EX122-SSH1	Q	DeviceNet, CompoBus/D (OMRON Corp.)	EX122-SDN1
E	Matsushita Electric Works: MEWNET-F System	EX122-SPA1	R1	OMRON Corp.: CompoBus/S System (16 output points)	EX122-SCS1
F1	NKE Corp.: Uni-wire System (16 output points)	EX122-SUW1	R2	OMRON Corp.: CompoBus/S System (8 output points)	EX122-SCS2
G	Rockwell Automation: Allen Bradley Remote I/O (RIO) System	EX122-SAB1	U	JEMANET (JPCN-1)	EX122-SJN1
H	NKE Corp.: Uni-wire H System	EX122-SUH1	V	Mitsubishi Electric Corp.: CC-LINK System	EX122-SMJ1

■ The serial transmission system reduces wiring work, while minimizing wiring and saving space.
■ Maximum 16 stations (Specify a model with more than 9 stations by means of the manifold specification sheet.)

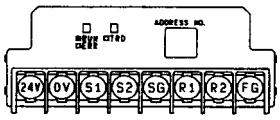


- Stations are counted from station 1 on the D side.
- Maximum station: Up to 16 solenoids (16 single solenoids).

Item	Specifications	
External power supply	24 VDC + 10%/– 5%	
Current consumption (Internal unit)	0.1 A	SA, SB, SD, SE, SF1, SG, SJ1, SJ2, SK, SR1, SR2
	0.3 A	SC, SQ

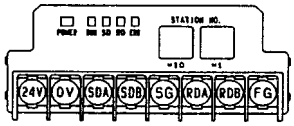
Name of terminal block, LED

Type SA
Series EX300



LED	Description
TRD	Lighting during data reception
RUN/ERR	Blinking when received data is normal; Lighting when data reception

Type SB Mitsubishi Electric Corporation
MELSECNET/MINI-S3
Data Link System



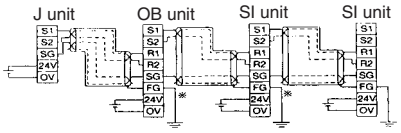
LED	Description
POWER	Lighting when power is turned ON
RUN	Lighting when data transmission with the master station is normal
RD	Lighting during data reception
SD	Lighting during data reception
ERR.	Lighting when reception data error occurs Light turns off when the error is corrected

Note

- Serial transmission is possible by connecting with I/O card of T unit PLC manufacturer.
  EX300-TMB1·····for Mitsubishi Electric Corporation
  EX300-TTA1·····for OMRON Corporation
  EX300-TFU1·····for Fuji Electric Co., Ltd.
  EX300-T001·····General purpose
  ∗ Each T unit has 32 control points.
- No. of output point, 16 points

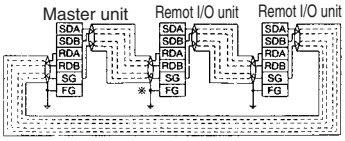
- MELSECNET/MINI-S3 Data Link System
  Master unit: AJ71PT32-S3
  AJ71T32-S3
  A1SJ71PT32-S3
- No. of output point, 16 points
  No. of sta. occupied, 2 stations

Cable wiring



∗ Ground either the reception side or the transmission side of the shielding wire shield.

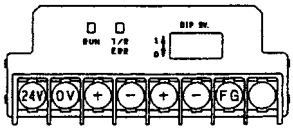
SI manifold solenoid valve



∗ Ground either the reception side or the transmission side of the shielding wire shield.

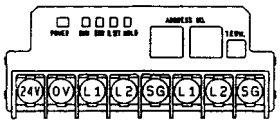
Name of terminal block, LED

Type SC
OMRON Corporation
SYSBUS Wire System



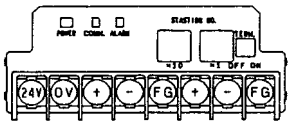
LED	Description
RUN	ON when transmission is normal and PLC is in operation mode.
T/R	Blinks during data transmission/reception
ERR	ON when transmission is abnormal

Type SD
SHARP Corporation
Satellite I/O Link System



LED	Description
POWER	ON when power supply is ON
RUN	ON when power is ON and slave unit operates normally
ERROR	ON for abnormal slave unit switch setting, abnormal communication, master unit PLC stopped and defective slave unit
R.SET HOLD	ON for master unit control input

Type SE
Matsushita Electric Works, Ltd.
MEWNET-F System



LED	Description
POWER	ON when power supply is ON
COMM	Blinks when transmission is normal
ALARM	ON for unit abnormality, blinks for station no. setting error

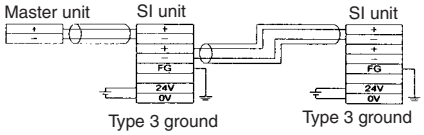
Note

- SYSBUS Wire System
  Master unit: Type C500-RM201
  C200H-RH201
- No. of output points, 16 points

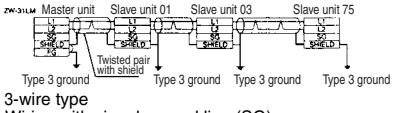
- Satellite I/O Link System
  Master unit: ZW-31LM
  JW-31LM
  JW-23LM
- No. of output points, 16 points

- MEWNET-F System
  Master unit: AFP3740
  AFP5740
- No. of output points, 16 points

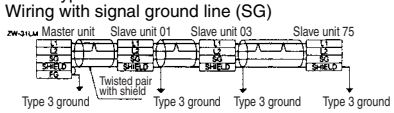
Cable wiring

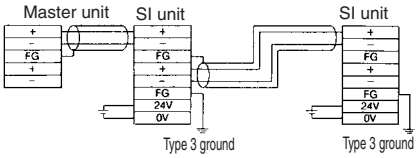


a) 2-wire type
Wiring without signal ground line (SG)



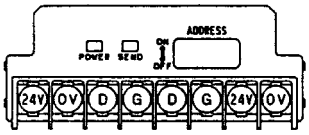
b) 3-wire type
Wiring with signal ground line (SG)





Type SF1 / NKE Corporation / Uni-wire System

Name of terminal block, LED

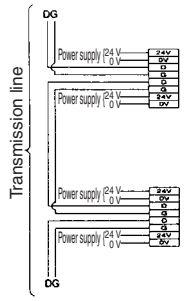


LED	Description
POWER	Lighting when power is turned ON (ON when normal, flickers when voltage drops)
SEND	Transmission indication: Blinks when normal, Blinks slowly when abnormal

Note

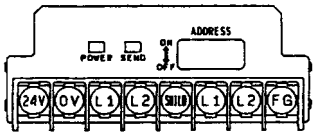
- Wiring Simplifying System
  Send unit: SD-120
- No. of output points, 16 points

Cable wiring



Type SG / Rockwell Automation, Inc. / Allen Bradley Remote I/O (RIO) System

Name of terminal block, LED

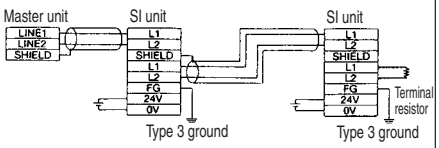


LED	Description
POWER	ON when power supply is ON
COM.	ON when communication is normal Blinks when communication is initialized OFF for abnormal communication
ERROR	ON for abnormal communication

Note

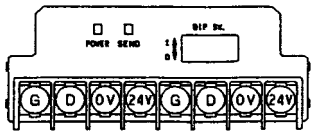
- Remote I/O (RIO) System
- No. of output points, 16 points

Cable wiring



Type SJ1, SJ2 / SUNX Corporation / S-LINK System

Name of terminal block, LED



LED	Description
POWER	Lighting when power is turned ON
SEND	Transmission indication: Blinks when normal, Blinks slowly when abnormal

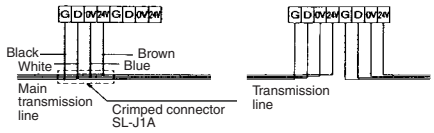
Note

- S-LINK System
  S-LINK Controller: SL-CU1
- No. of output points, 16 points (Type SJ1)
  No. of output points, 8 points (Type SJ2)

Cable wiring

a) Type T branching multi-drop wiring (S-LINK System)

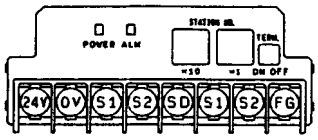
b) Crossover wiring (Sensor Link System)



The above is the example of using dedicated S-LINK flat ribbon cable SL-RCM∗I00.

Type SK / Fuji Electric Co. Ltd. / T-LINK Mini System

Name of terminal block, LED

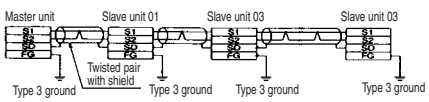


LED	Description
POWER	Lighting when power is turned ON
SEND	ON when communication power is supplied, OFF when power is OFF

Note

- T-LINK Mini System
  Master unit: FTM100B
  Converter: FRC100A-G02
  Repeater: FRC200A-C10
- No. of output points, 16 points

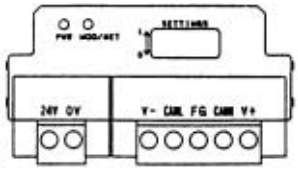
Cable wiring



Connect the shielding wire to the SD terminal. If the shielding wire is not connected to the SD terminal, normal transmission will be impossible even for short distances. Furthermore, do not ground the shielding wire (SD).

Type SQ / DeviceNet

Name of terminal block, LED

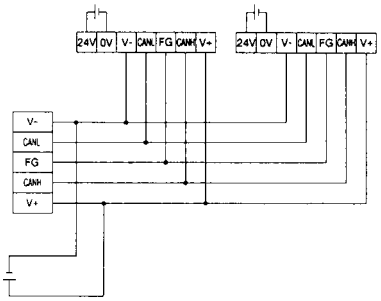


LED	Description
POWER	Green light ON with circuit power input
MOD/NET	It turns OFF when unit and circuit are not powered
	Green light ON continuously: When the unit is online and in operation
	Red light blinks when an abnormal transmission is generated in the unavailable circuit.
	Red light turns ON when an abnormal transmission is generated in the unavailable circuit or neither unit or circuit is available.

Note

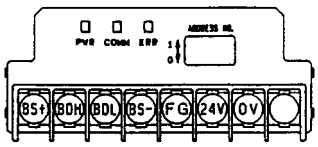
- DeviceNet
- OMRON Corp's CompoBus/D System
  Master station unit: C200HW-DSM21
- No. of output points, 16 points

Cable wiring



Type SR1, SR2 / OMRON Corporation / CompoBus/S System

Name of terminal block, LED

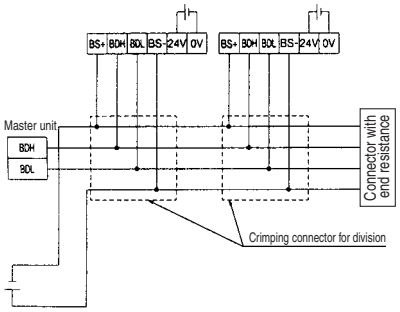


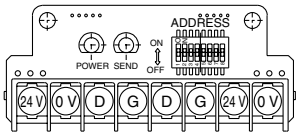
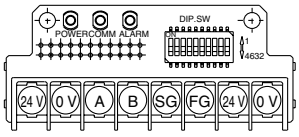
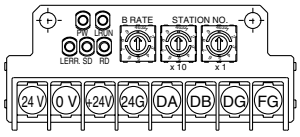
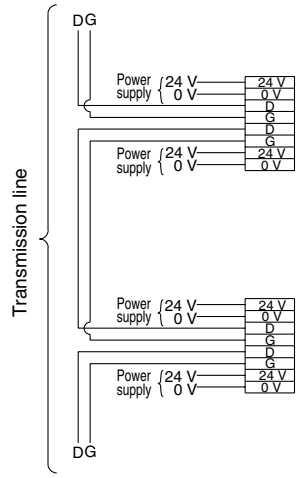
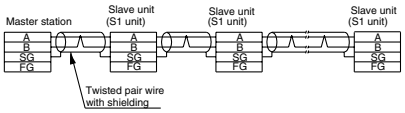
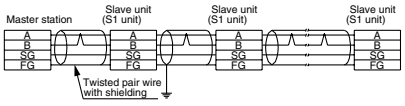
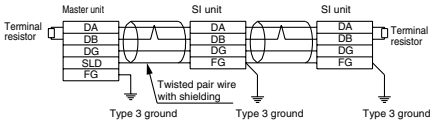
LED	Description
POWER	Light ON with transmission power input, light Off without it
COMM	ON for normal communication, OFF for abnormal communication or waiting
ERR	ON for abnormal communication, OFF for normal communication or waiting

Note

- CompoBus/S System
  Master station unit: C200HW-SRM21
  Master station unit: CQM1-SRM21
- No. of output points, 16 points (Type SR1)
- No. of output points, 8 points (Type SR2)

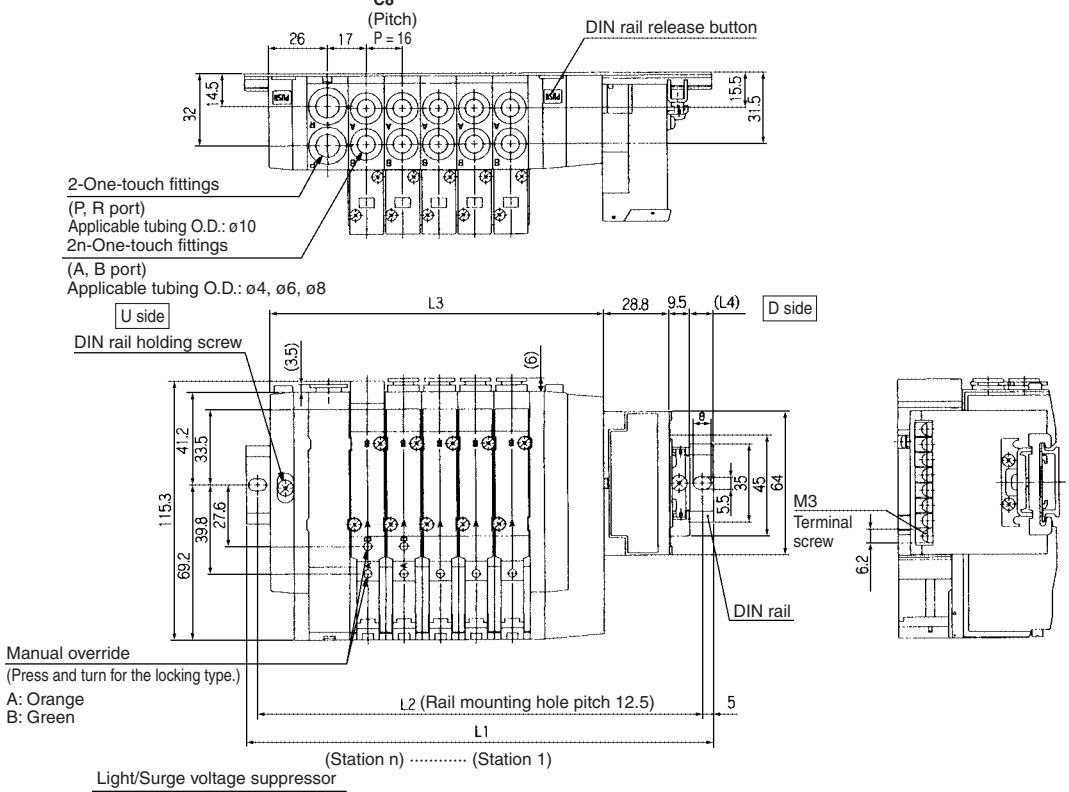
Cable wiring

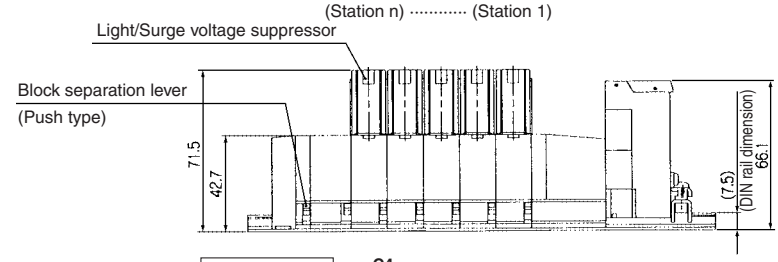


	Type SH NKE Corporation Uni-wire H System	Type SU JEMANET (JPCN-1)	Type SV Mitsubishi Electric Corporation CC-LINK System
Name of terminal block, LED			
	LED / Description POWER: Lighting when power is turned ON (ON when normal, flickers when voltage drops) SEND: Transmission indication: Blinks when normal, Transmission indication: OFF or ON when abnormal	LED / Description POWER: ON for SI unit power supply input COMM: On for normal communication ALARM: ON for abnormal communication	LED / Description PWR: Light ON with transmission power input, light Off without it L RUN: ON when normal data is being received SD: ON when data is transmitted RD: ON when data is received L ERR.: ON for transmission error/wrong setting, Blinks when station or transmission speed setting changes during operation
Note	• Uni-wire H System Send unit: SD-H2 • No. of output points, 16 points	• JEMANET (JPCN-1) (Reference) AJ71J92-S3 (Mitsubishi Electric Corporation) A1SJ71J92-S3 (Mitsubishi Electric Corporation) Type C200HW-JRM21 (OMRON Corporation) NJ-JPCN-1 (Fuji Electric Co., Ltd.) NP1L-JP1 (Fuji Electric Co., Ltd.) • No. of output points, 16 points	• CC-LINK System Master unit: AJ61BT11 A1SJ61BT11 AJ61QBT11 A1SJ61QBT11 • No. of output points, 16 points
Cable wiring		a) 2-wire type  b) 3-wire type 	

SX5000: Serial Transmission Unit/Plug-in

SS5X5-45S□- Stations U-C4 C6 C8



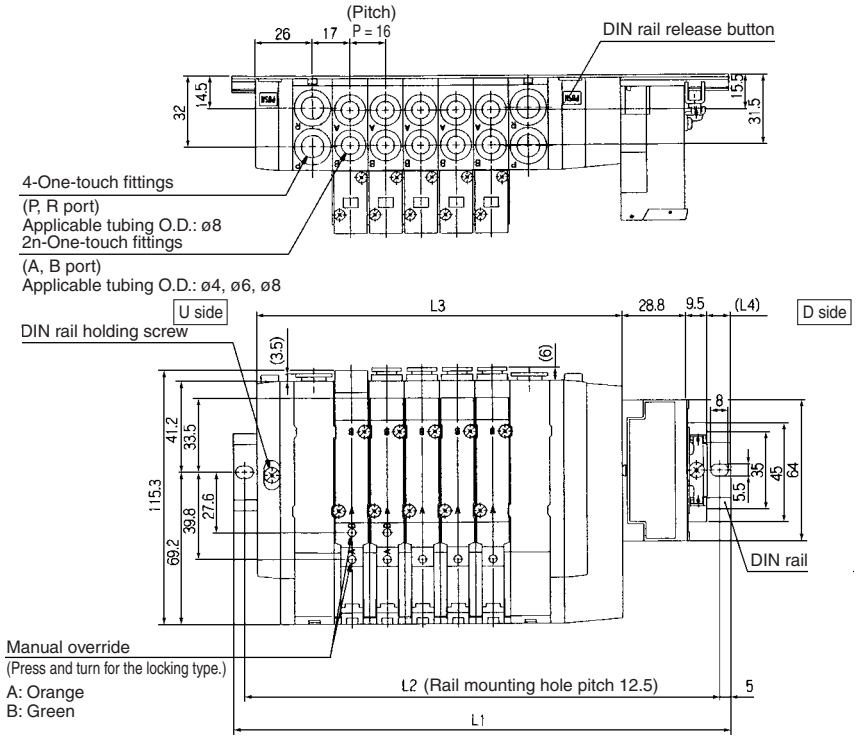


(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	198	210.5	235.5	248	260.5	285.5	298
L2	162.5	175	187.5	200	225	237.5	250	275	287.5
L3	100	116	132	148	164	180	196	212	228
L4	17.5	15.5	14	12	16.5	15	13	17.5	16

Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to 24.3 mm. For further information, please consult with SMC.

SS5X5-45S□- Stations B-C4 C6 C8



(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	185.5	198	223	235.5	248	260.5	285.5	298	310.5
L2	175	187.5	212.5	225	237.5	250	275	287.5	300
L3	118	134	150	166	182	198	214	230	246
L4	14.5	13	17.5	15.5	14	12	16.5	15	13

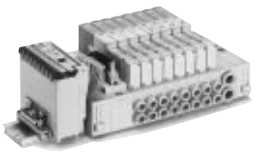
Stations n	11 stations	12	13	14	15	16 stations
L1	335.5	348	360.5	373	398	410.5
L2	325	337.5	350	362.5	387.5	400
L3	262	278	294	310	326	342
L4	17.5	16	14	12.5	17	15

Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to 24.3 mm. For further information, please consult with SMC.

Type 45S1□

Series ***SX3000/5000***

Base Mounted Manifold
Stacking Type DIN Rail Mounted
Serial Transmission Type (Separated)



How to Order Manifold

SS5X 3 — 45S1 A D — 05 U — C4 □

Series

3	SX3000
5	SX5000

SI unit

Symbol	Specifications
O	Without SI unit
A	With general type SI unit (Series EX300)
B	Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System
C	OMRON Corp.: SYSBUS Wire System
D	SHARP Corp.: Satellite I/O Link System
E	Matsushita Electric Works: MEWNET-F System
F1	NKE Corp.: Uni-wire System (16 output points)
G	Rockwell Automation: Allen Bradley Remote I/O (RIO) System
H	NKE Corp.: Uni-wire H System
J1	SUNX Corp.: S-LINK System (16 output points)
J2	SUNX Corp.: S-LINK System (8 output points)
K	Fuji Electric Co.: T-LINK Mini System
Q	DeviceNet, CompoBus/D (OMRON Corp.)
R1	OMRON Corp.: CompoBus/S System (16 output points)
R2	OMRON Corp.: CompoBus/S System (8 output points)
U	JEMANET (JPCN-1)
V	Mitsubishi Electric Corp.: CC-LINK System

- For the general purpose type, a transmission unit is required on the CPU side.
- Even though when it is not equipped with SI unit, DIN rail length is long enough for future expectancy of mounting SI unit.

SI unit mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications
⋮	⋮	
08	8 stations	
09	9 stations	Applicable up to 16 solenoids. Use the manifold specification sheet to specify the wiring specifications.
⋮	⋮	
16	16 stations	

- This also includes the number of blanking plate assemblies.
- When special wiring is required on manifold with 2 to 8 stations, please use the manifold specification sheet.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

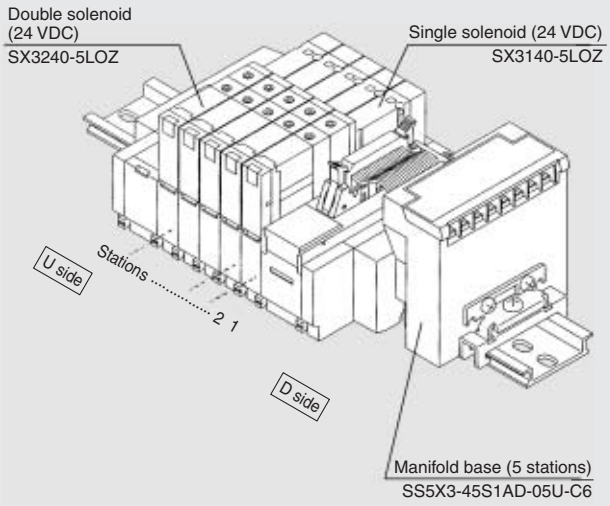
∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations maximum)

How to Order Valve Manifold Assembly

Ordering example



SS5X3-45S1AD-05U-C6··· 1 set (45S1 with serial 5-station manifold base no.)
∗SX3140-5LOZ····· 2 sets (Single solenoid part no.)
∗SX3240-5LOZ····· 3 sets (Double solenoid part no.)

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

- They will be assembled in the order listed starting at the first station at the D side whether the connector box is located at either end. When ordering with the double wiring specification, specify it in order, beginning with the 1 station on the D side.
- For manifolds with more than 8 stations (9 to 16), special wiring is required. Please use the manifold specification sheet.

How to Order Valves

SX 3 2 40 — 5 LOZ □

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

5	24 VDC

Manual override

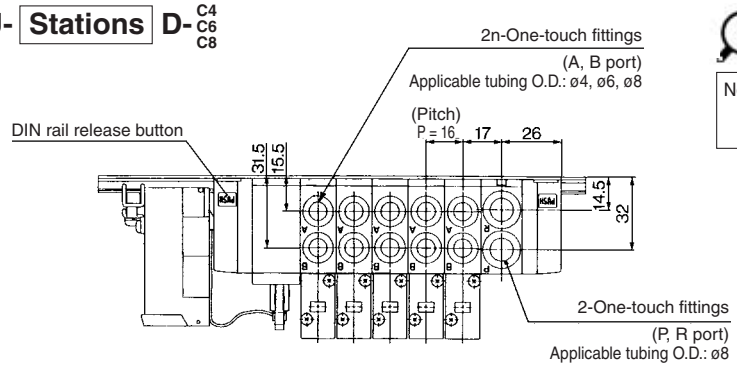
Nil	Non-locking push type
D	Push-turn locking slotted type

SI Unit Part No.

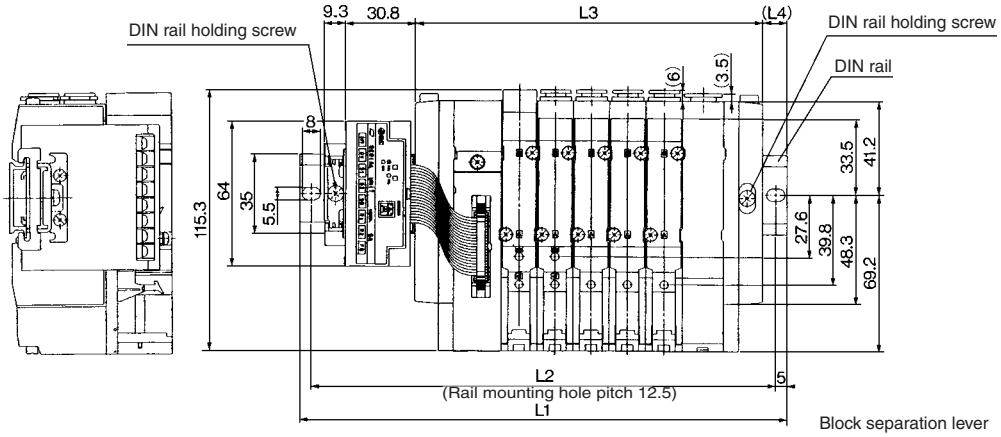
Symbol	Specifications	For SS5X□-45S	Symbol	Specifications	For SS5X□-45S
A	With general type SI unit (Series EX300)	EX321-S001	J1	SUNX Corp.: S-LINK System (16 output points)	EX121-SSL1
B	Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System	EX321-S001	J2	SUNX Corp.: S-LINK System (8 output points)	EX121-SSL2
C	OMRON Corp.: SYSBUS Wire System	EX121-STA1	K	Fuji Electric Co.: T-LINK Mini System	EX121-SFU1
D	SHARP Corp.: Satellite I/O Link System	EX121-SSH1	Q	DeviceNet, CompoBus/D (OMRON Corp.)	EX121-SDN1
E	Matsushita Electric Works: MEWNET-F System	EX121-SPA1	R1	OMRON Corp.: CompoBus/S System (16 output points)	EX121-SCS1
F1	NKE Corp.: Uni-wire System (16 output points)	EX121-SUW1	R2	OMRON Corp.: CompoBus/S System (8 output points)	EX121-SCS2
G	Rockwell Automation: Allen Bradley Remote I/O (RIO) System	EX121-SAB1	U	JEMANET (JPCN-1)	EX121-SJN1
H	NKE Corp.: Uni-wire H System	EX121-SUH1	V	Mitsubishi Electric Corp.: CC-LINK System	EX121-SMJ1

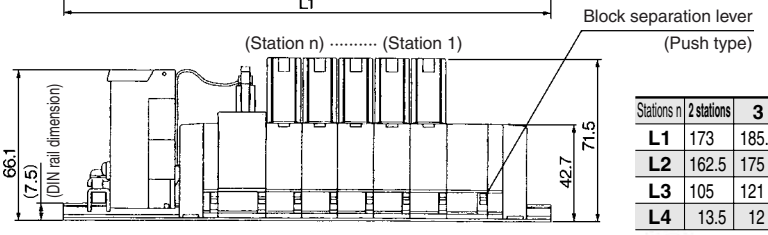
SX5000: Serial Transmission Unit/Plug-in

SS5X5-45S1□U- Stations D-C4/C6/C8



Note) The L1 to L4 dimensions of SS5X5-45S1□ U-Stations U-□ are identical to those of SS5X5-45S1□ U-Stations D-□.



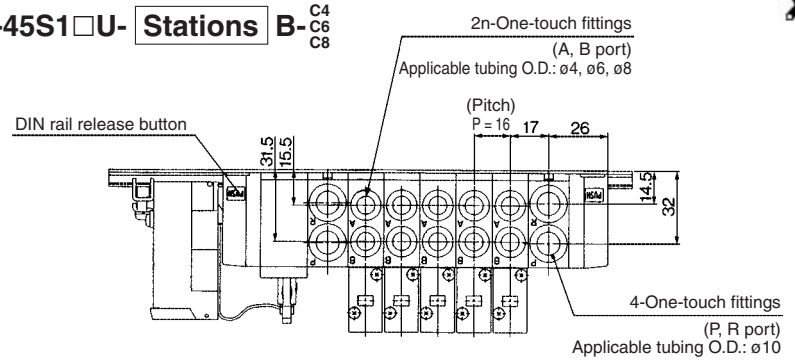


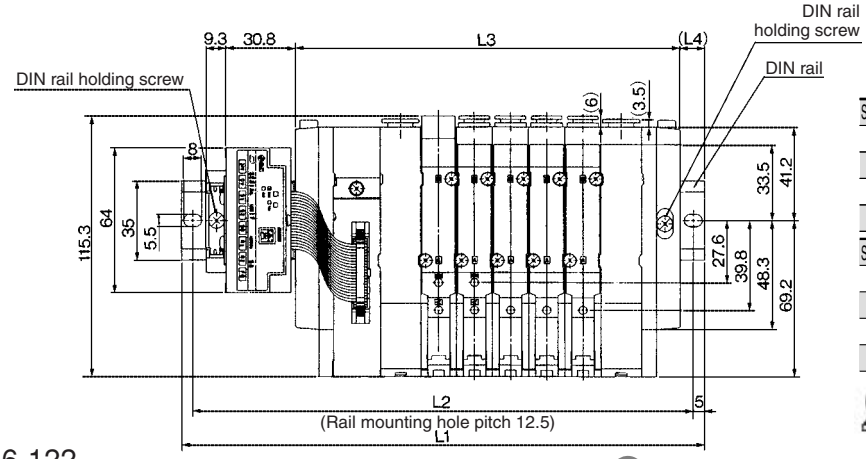
(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	210.5	223	235.5	260.5	273	285.5	298
L2	162.5	175	200	212.5	225	250	262.5	275	287.5
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12

Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to 24.3 mm. For further information, please consult with SMC.

SS5X5-45S1□U- Stations B-C4/C6/C8





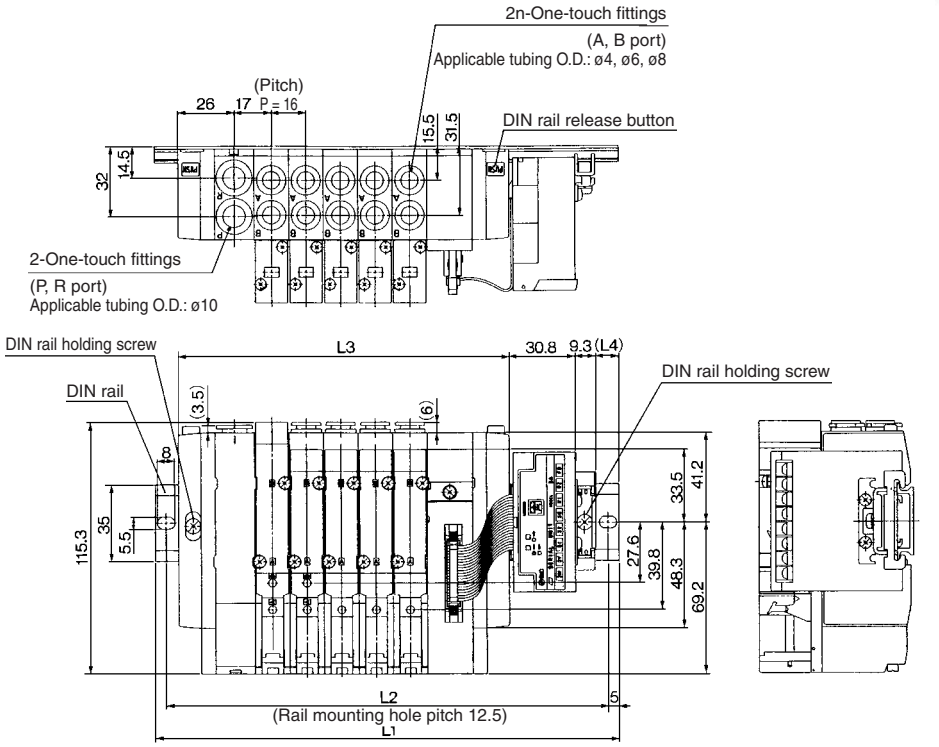
(mm)

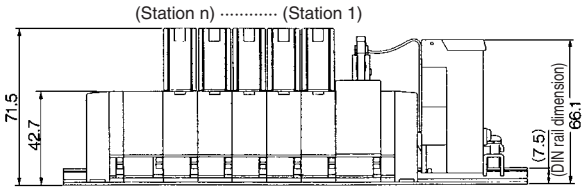
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	198	210.5	223	235.5	260.5	273	285.5	310.5	323
L2	187.5	200	212.5	225	250	262.5	275	300	312.5
L3	123	139	155	171	187	203	219	235	251
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

Stations n	11 stations	12	13	14	15	16 stations
L1	335.5	348	373	385.5	398	410.5
L2	325	337.5	362.5	375	387.5	400
L3	267	283	299	315	331	347
L4	14	12	16.5	15	13	11.5

Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to 24.3 mm. For further information, please consult with SMC.

SS5X5-45S1□D- Stations U- C4 C6 C8





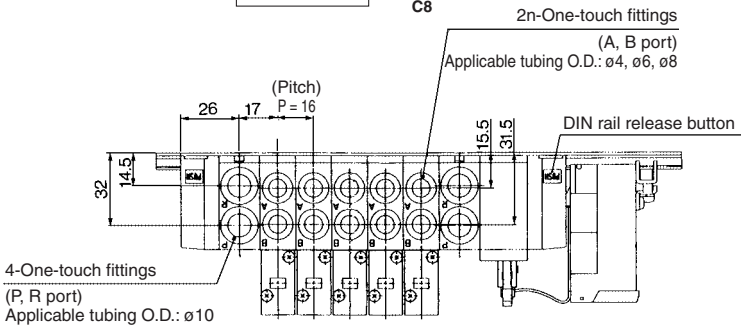
Note) The L1 to L4 dimensions of SS5X5-45S1□ D-Stations D-□ are identical to those of SS5X-45S1□ D-□Stations U-□.

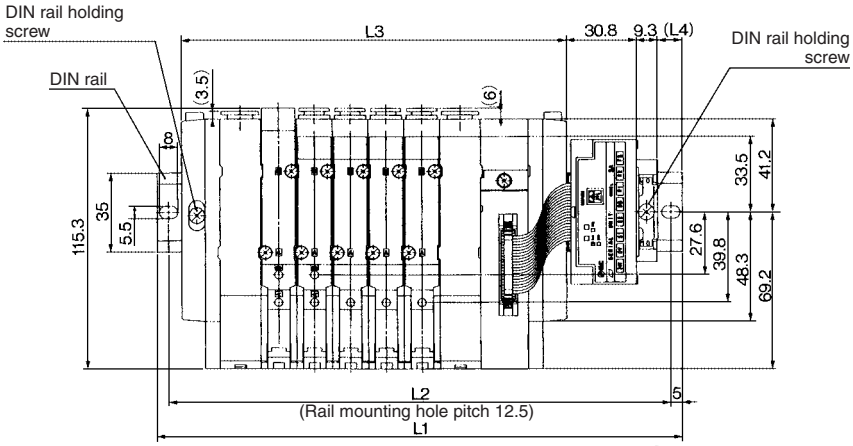
(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	210.5	223	235.5	260.5	273	285.5	298
L2	162.5	175	200	212.5	225	250	262.5	275	287.5
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12

Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to 24.3 mm. For further information, please consult with SMC.

SS5X5-45S1□D- Stations B- C4 C6 C8





(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	198	210.5	223	235.5	260.5	273	285.5	310.5	323
L2	187.5	200	212.5	225	250	262.5	275	300	312.5
L3	123	139	155	171	187	203	219	235	251
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

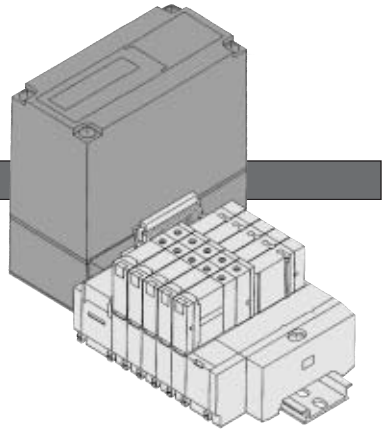
Stations n	11 stations	12	13	14	15	16 stations
L1	335.5	348	373	385.5	398	410.5
L2	325	337.5	362.5	375	387.5	400
L3	267	283	299	315	331	347
L4	14	12	16.5	15	13	11.5

Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to 24.3 mm. For further information, please consult with SMC.

Made to Order

Type 45S2

Made to Order Specifications:
Series SX3000/5000 Serial Transmission Type
With SMC's IN313



Serial Transmission Manifold Equipped with IN313

How to Order Manifold

Type 45S2 (Serial type with IN313)

SS5X 3 – 45S2 U – 06 D – C4 –

Series

3	SX3000
5	SX5000

SI unit mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications
⋮	⋮	
08	8 stations	
09	9 stations	Applicable up to 16 solenoids. Use the manifold specification sheet to specify the wiring specifications.
⋮	⋮	
16	16 stations	

- This also includes the number of blanking plate assemblys.
- When special wiring is required on manifold with 2 to 8 stations, please use the manifold specification sheet.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

How to Order Applicable SI Unit

IN313 – MB1

Applicable makers

MB1	For Mitsubishi Electric Corporation
TA1	For OMRON Corporation
FU1	For Fuji Electric Co., Ltd.
SH1	For SHARP Corporation
TY1	For Toyoda Machine Works, Ltd.
TY2	
PA1	For Matsushita Electric Works, Ltd.
HT1	For Hitachi, Ltd.
AB1	For Rockwell Automation, Inc. (Former Allen Bradley)
TS1	For TOSHIBA Corporation

How to Order Valves

SX 3 2 40 – 5 LOZ

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

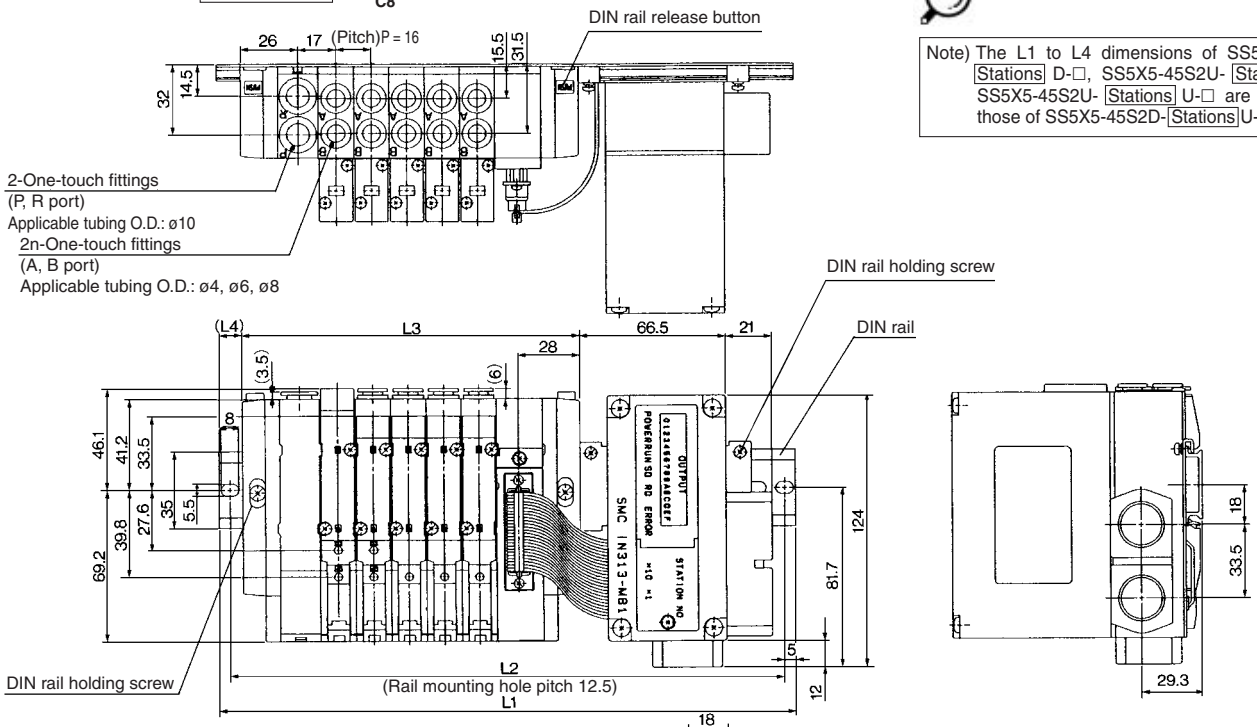
5	24 VDC

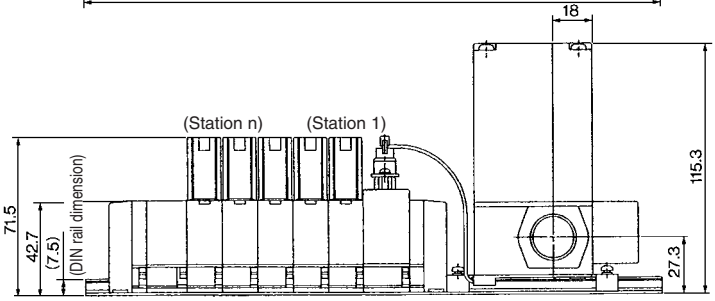
Manual override

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

SX5000: Serial Transmission Unit/Plug-in

SS5X5-45S2D- Stations U- C4 C6 C8



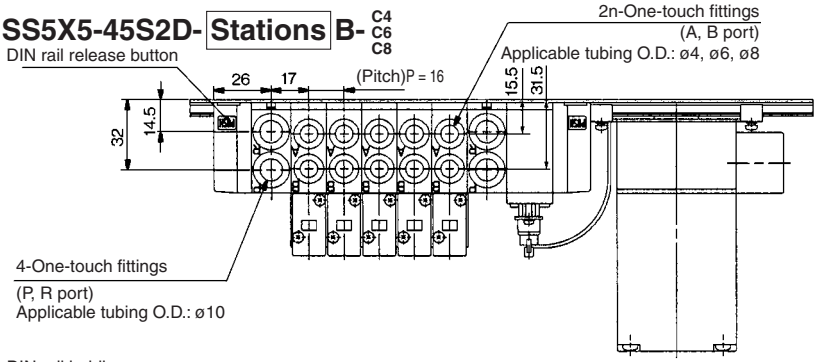


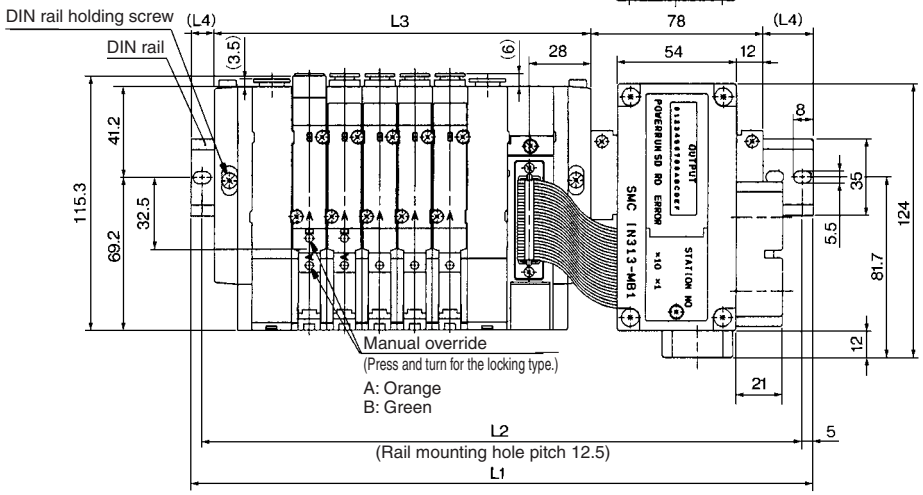
Note) The L1 to L4 dimensions of SS5X5-45S2D- Stations D-□, SS5X5-45S2U- Stations D-□, SS5X5-45S2U- Stations U-□ are identical to those of SS5X5-45S2D- Stations U-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	210.5	223	248	260.5	273	298	310.5	323	335.5
L2	200	212.5	237.5	250	262.5	287.5	300	312.5	325
L3	105	121	137	153	169	185	201	217	238
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SS5X5-45S2D- Stations B- C4 C6 C8





Note) The L1 to L4 dimensions of SS5X5-45S2U- Stations B-□ are identical to those of SS5X5-45S2D- Stations B-□ .

(mm)

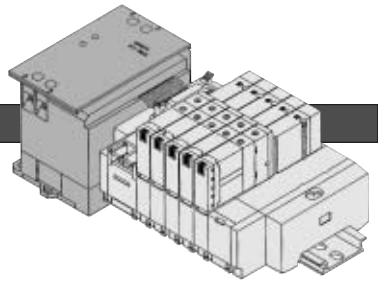
Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	235.5	248	260.5	273	298	310.5	323	348
L2	225	237.5	250	262.5	287.5	300	312.5	337.5
L3	123	139	155	171	187	203	219	235
L4	17	15.5	13.5	12	16.5	14.5	13	17.5

Stations n	10 stations	11	12	13	14	15	16 stations
L1	360.5	373	385.5	410.5	423	435.5	460.5
L2	350	362.5	375	400	412.5	425	450
L3	251	267	283	299	315	331	347
L4	15.5	14	12	16.5	15	13	17.5

Made to Order

Type 45S3

Made to Order Specifications:
Series SX3000/5000 Serial Transmission Type
With OMRON Corp's G71-OD16



Serial Transmission Manifold Equipped with OMRON Corp's Transmission Unit G71-OD16

How to Order Manifold

Type 45S3 (Serial type with transmission unit)

SS5X 3 – 45S3 [ ] [U] – [06] [D] – [C4] – [ ]

Series

3	SX3000
5	SX5000

Specifications

Symbol	Specifications
Nil	With transmission unit
O Note)	Without transmission unit

Note) Even though when it is not equipped with transmission unit, DIN rail length is long enough for future expectancy of mounting transmission unit. When a shorter rail is required (same as type 45□), suffix "O" in the optional blank at the end of part number.

Transmission unit mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications
⋮	⋮	
08	8 stations	
09	9 stations	Applicable up to 16 solenoids. Use the manifold specification sheet to specify the wiring specifications.
⋮	⋮	
16	16 stations	

- This also includes the number of blanking plate assemblies.
- When special wiring is required on manifold with 2 to 8 stations, please use the manifold specification sheet.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

How to Order Valves

SX 3 2 40 – 5 LOZ [ ]

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

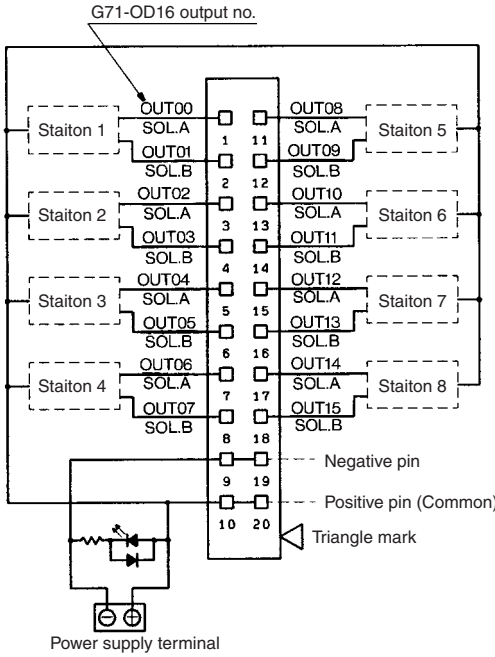
5	24 VDC

Manual override

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

Internal Wiring of Manifold

Serial type 45S3



- For specifications on OMRON Corp's transmitter terminals, refer to the instruction manual or the catalog of transmitter terminals, etc.
- When using a single solenoid, connect wire to A side.
- The above diagram is the double wiring specifications for up to 8 stations. When the wiring specifications are specified on the manifold specification sheet, the valve assignment for the number of transmission unit will differ from the above diagram. For more information, please contact SMC.
- The maximum number of stations is 16 in terms of manifold bases, as well as solenoids. (Please consult with SMC for more stations.)

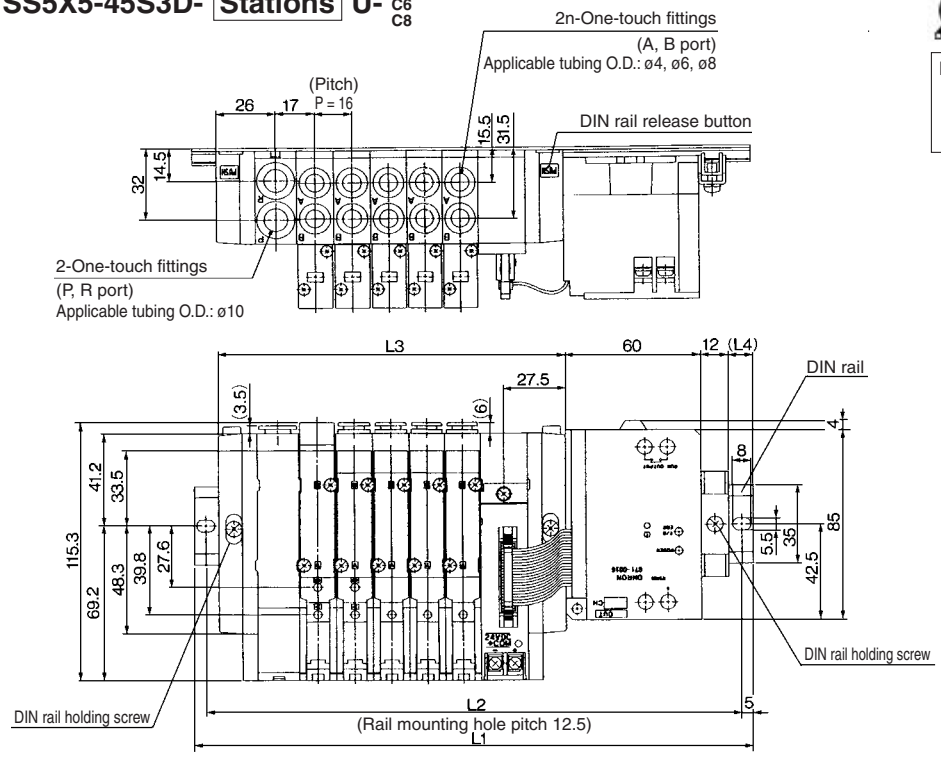
⚠ Caution

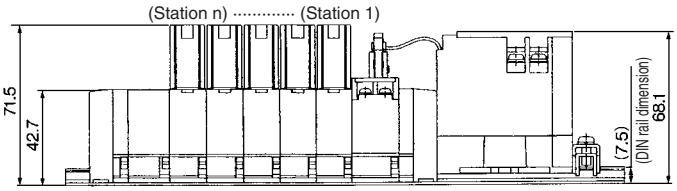
- The wiring specifications for SS5X$\frac{3}{5}$-45S30 are different from those for SS5X$\frac{3}{5}$-45PG.

SV
SZ
SY
SYJ
SX

SX5000: Serial Transmission Unit/Plug-in

SS5X5-45S3D- Stations U- C4 C6 C8



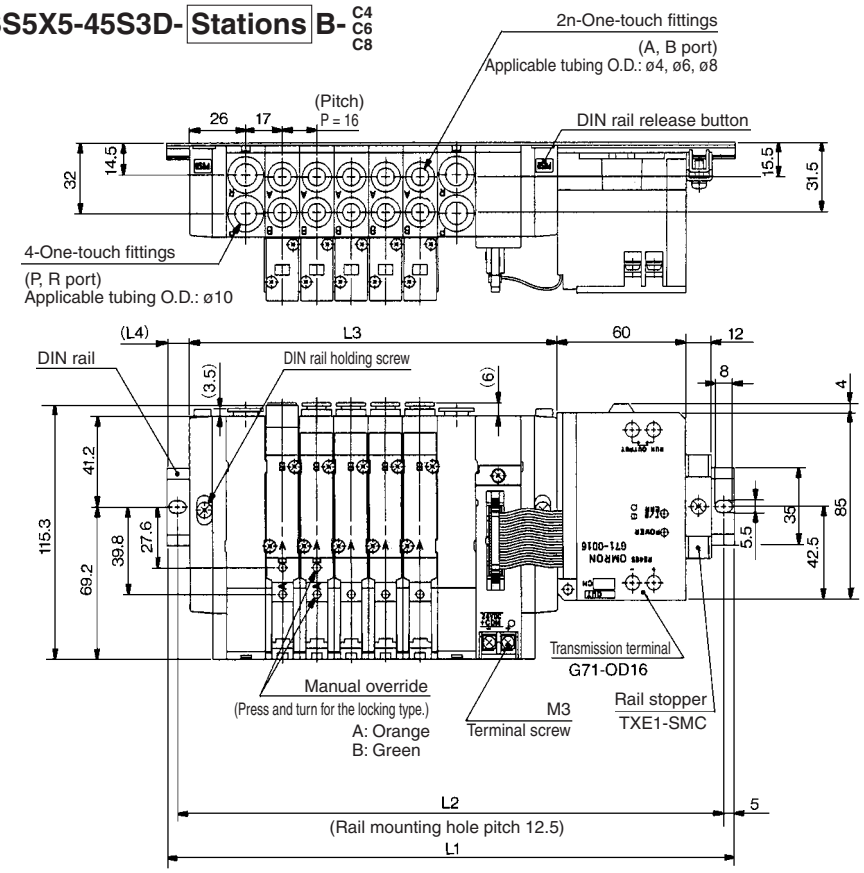


Note) The L1 to L4 dimensions of SS5X3-45S3D-Stations D-□, SS5X5-45S3U-Stations D-□, SS5X3-45S3U-Stations U-□ are identical to those of SS5X5-45S3D-Stations U-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	210.5	223	235.5	260.5	273	285.5	298	323	335.5
L2	200	212.5	225	250	262.5	275	287.5	312.5	325
L3	105	121	137	153	169	185	201	217	238
L4	16.5	15	13	17.5	16	14	12.5	17	15

SS5X5-45S3D- Stations B- C4 C6 C8



Note) The L1 to L4 dimensions of SS5X5-45S3U-Stations B-□ are identical to those of SS5X5-45S3D-Stations B-□.

(mm)

Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	223	235.5	260.5	273	285.5	310.5	323	335.5
L2	212.5	225	250	262.5	275	300	312.5	325
L3	123	139	155	171	187	203	219	235
L4	14	12	16.5	15	13	17.5	16	14

Stations n	10 stations	11	12	13	14	15	16 stations
L1	348	373	385.5	398	410.5	435.5	448
L2	337.5	362.5	375	387.5	400	425	437.5
L3	251	267	283	299	315	331	347
L4	12.5	17	15	13.5	11.5	16	14.5

Type 45

Type 45□

Made to Order

Made to Order Specifications:
Series SX3000/5000
External Pilot/Built-in Silencer

External pilot manifold bases for low-pressure/vacuum use are added to split style/DIN rail manifolds. The built-in silencer has produced a clear-cut appearance.

Individual Wiring

How to Order Manifold

Type 45

SS5X 3/5 – 45 – **05** **U** **R** **C6** □

Series

3	SX3000
5	SX5000

Valve stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

• This also includes the number of blanking plate assemblies.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations maximum)

SUP/EXH block assembly specifications

Symbol	Specifications
R	External pilot specifications
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer

A, B port size

(Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

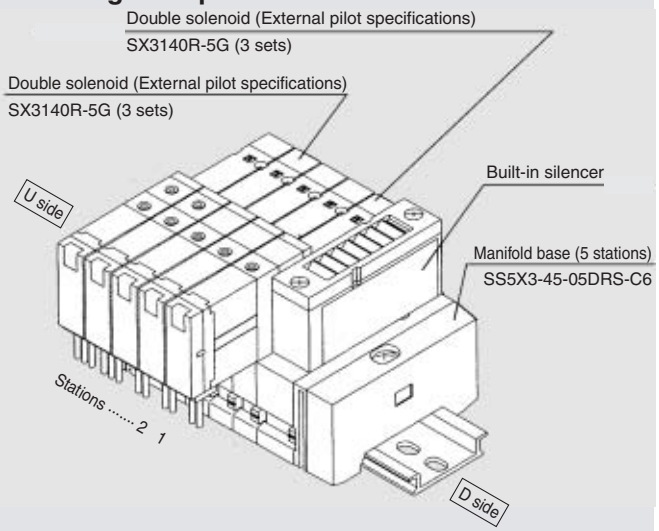
(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example



SS5X3-45-05DRS-C6··1 set (External pilot specifications built-in silencer part no.)
∗SX3140R-5G····· 3 sets (Single solenoid part no.)
∗SX3240R-5G····· 2 sets (Double solenoid part no.)

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

They will be assembled in the order listed starting at the first station at the D side even if SUP/EXH block assembly is located at either end.
In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the Manifold Specification Sheet to instruct us.
For manifolds with SUP/EXH block at each end of the manifold, external pilot ports and silencers will be also located at each end of the manifold.
To order the SUP/EXH block assembly (SX3/5000-51-1A) mounted at a location order than the ends of manifold, refer to the manifold specification sheet along with assembly part no.

How to Order Valves

SX **5** **2** **40** □ – **5** **N** **L** □ □

Series

3	SX3000
5	SX5000

Type of actuation

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

Pilot type

Nil	Internal pilot
R	External pilot

Rated voltage

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

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.

Electrical entry

Grommet	L plug connector	M plug connector
G: Lead wire length 300 mm lead	**L:** With lead wire (Length 300 mm)	**M:** With lead wire (Length 300 mm)
H: Lead wire length 600 mm	**LN:** Without lead wire	**MN:** Without lead wire
	LO: Without connector	**MO:** Without connector

∗ The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

Manual override

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

Plug-in Type

How to Order Manifold

Type 45□

SS5X$^{3}_{5}$ −45 [ ] [F] [U] [05] [U] [R] [C4] [ ] [ ]

Series

3	SX3000
5	SX5000

Common specifications

Nil	Positive common
N	Negative common

No symbol is used for T, T1, S□ types.

Connector type

Symbol	Mounting position
F	D-sub connector
P	Flat ribbon cable 26 pins
PG	Flat ribbon cable 20 pins
PH	Flat ribbon cable 10 pins
T	Terminal block 9 pins
T1	Terminal block 18 pins
G	Flat ribbon cable (PC wiring system compatible)
S□	Serial Transmission Type

For details, refer to pages 1-6-82 to 85, 112, 119, 124, and 127.

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the

SUP/EXH block assembly specifications

Symbol	Specifications
R	External pilot specifications
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer

Valve stations

Symbol	Stations	Note
02	2 stations	Depending on the connector,the number of stations is limited. For details, refer to pages 1-6-82 to 85, 112, 119, 124, and 127.
⋮	⋮	
20	20 stations	

• This also includes the number of blanking plate assemblies.

A, B port size (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SX3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SX5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

(Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SX3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SX5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Voltage

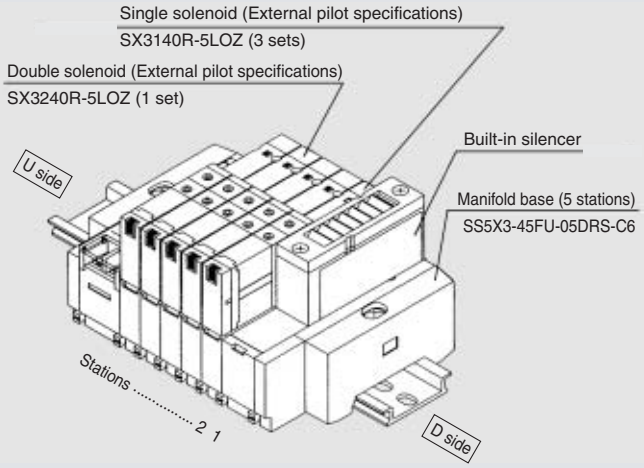
Nil	24 VDC
12V	12 VDC

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

How to Order Valve Manifold Assembly

Ordering example



SS5X3-45FU-05DRS-C6··1 set (External pilot specifications with built-in silencer part no.)
∗SX3140R-5LOZ····· 3 sets (Single solenoid part no.)
∗SX3240R-5LOZ····· 2 sets (Double solenoid part no.)

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

They will be assembled in the order listed starting at the first station at the D side even if SUP/EXH block assembly is located at either end.
In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the Manifold Specification Sheet to instruct us.
For manifolds with SUP/EXH block at each end of the manifold, external pilot ports and silencers will be also located at each end of the manifold.
To order the SUP/EXH block assembly (SX3/5000-51-2A) mounted at a location other than the ends of manifold, refer to the manifold specification sheet.

How to Order Valves

SX [3] [2] 40 [ ] − [5] [ ] LOZ [ ]

Series

3	SX3000
5	SX5000

Type of actuation

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

Pilot type

Nil	Internal pilot
R	External pilot

Rated voltage

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

∗ mark: Type 45T and T1 only S□ type: 24 VDC only

Common specifications

Nil	Positive common
N	Negative common

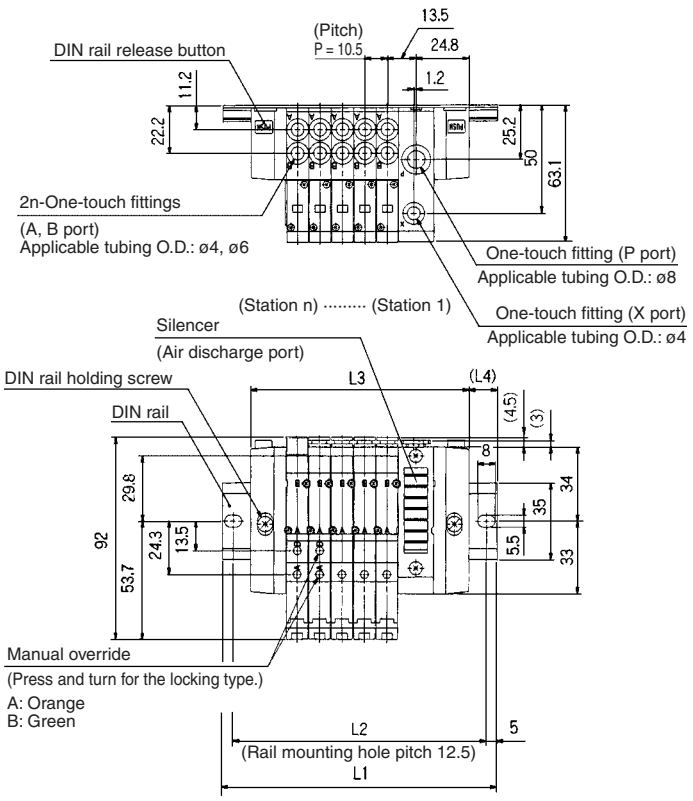
∗ Common specifications for the valve must correspond with common specifications for the manifold.

Manual override

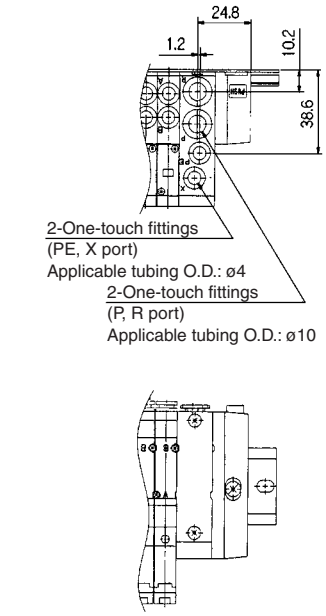
Nil	Non-locking push type
D	Push-turn locking slotted type

External Pilot/Built-in Silencer

SX3000: SS5X3-45- Stations DRS- C4 C6

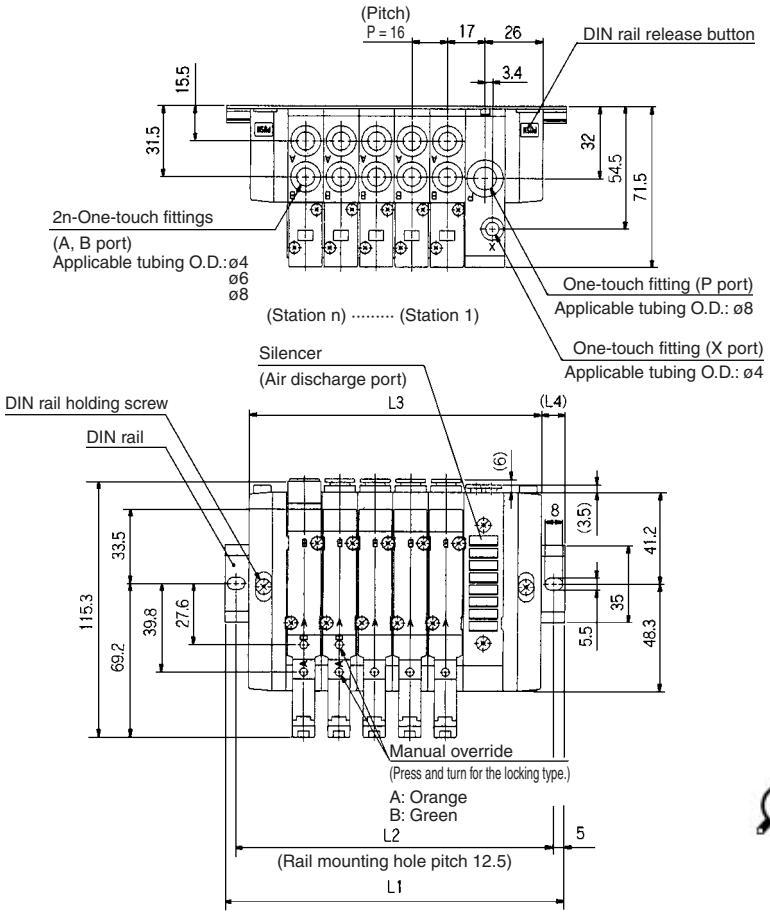


SS5X3-45- Stations DR- C4 C6

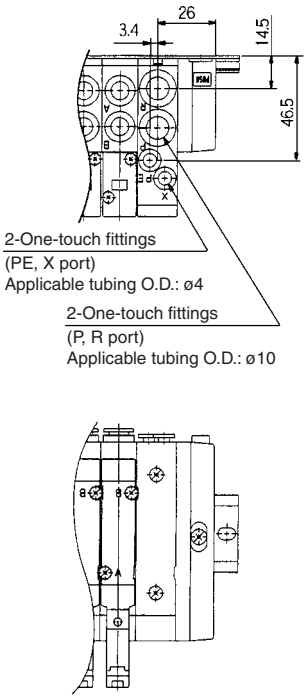


Note) The dimensions L1 to L4 are identical to SS5X3-45 - Station U/B - C4/C6 (P. 1-6-78).

SX5000: SS5X5-45- Stations DRS- C4 C6 C8



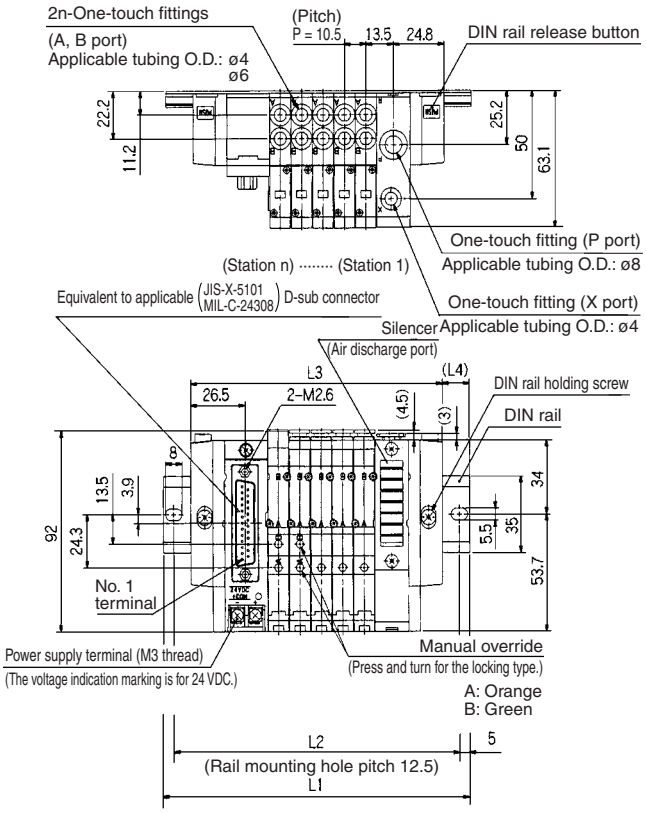
SS5X5-45- Stations DR- C4 C6 C8



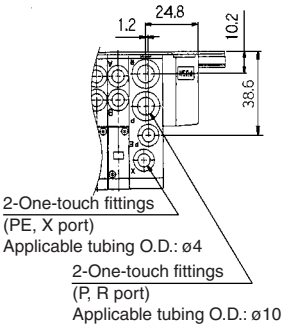
Note) The dimensions L1 to L4 are identical to SS5X5-45 - Station U/D/B - C4/C6/C8 (P. 1-6-79).

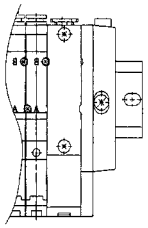
External Pilot/Built-in Silencer

SX3000:SS5X3-45FU- Stations DRS- C4 C6



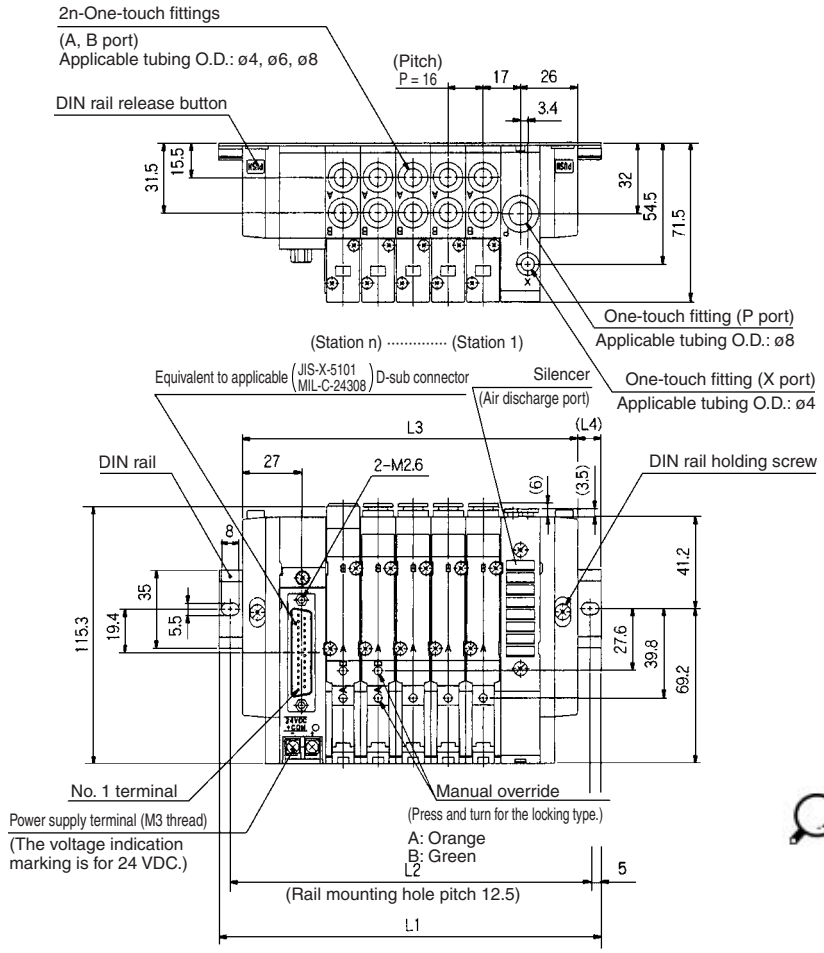
SS5X3-45FU- Stations DR- C4 C6



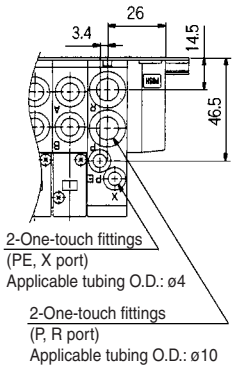


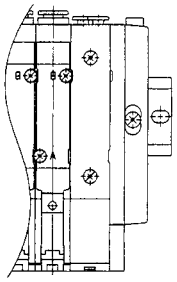
Note) The dimensions L1 to L4 are identical to SS5X3-45F U D Station U D B - C4 C6 (P. 1-6-92).

SX5000:SS5X5-45FU- Stations DRS- C4 C6 C8



SS5X5-45FU- Stations DR- C4 C6 C8





Note) The dimensions L1 to L4 are identical to SS5Y5-45F U D Station U D B - C4 C6 C8 (P. 1-6-94).

Type M45

Type M45□

Made to Order Specifications:
Series SX3000/5000
Mixed Mounting

Made to Order

Non plug-in type

This manifold makes it possible to mount SX3000 onto base of SX5000.

How to Order Manifold

Type M45 (Mixed mounting type)

SS5X5 – M45 – 05 U □ – C86 □

Mixed mounting style

Valve stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

• This also includes the number of blanking plate assembly.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations maximum)

SUP/EXH block assembly specifications

Symbol	Specifications
Nil	Standard/Internal pilot specifications
S	Built-in silencer

External pilot specifications are unavailable for mixed mounting style.

A, B port size

(Metric size)

Symbol	Port size
C44	SX5000: One-touch fitting for ø4 SX3000: One-touch fitting for ø4
C46	SX5000: One-touch fitting for ø6 SX3000: One-touch fitting for ø6
C64	SX5000: One-touch fitting for ø6 SX3000: One-touch fitting for ø4
C66	SX5000: One-touch fitting for ø8 SX3000: One-touch fitting for ø6
C84	SX5000: One-touch fitting for ø8 SX3000: One-touch fitting for ø4
C86	SX5000: One-touch fitting for ø4 SX3000: One-touch fitting for ø6
M	Mixed

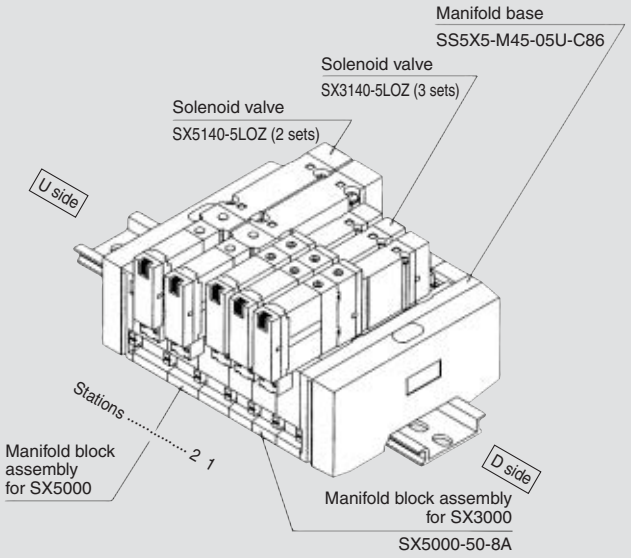
(Inch size)

Symbol	Port size
N33	SX5000: One-touch fitting for ø5/32" SX3000: One-touch fitting for ø5/32"
N37	SX5000: One-touch fitting for ø5/32" SX3000: One-touch fitting for ø1/4"
N73	SX5000: One-touch fitting for ø1/4" SX3000: One-touch fitting for ø5/32"
N77	SX5000: One-touch fitting for ø1/4" SX3000: One-touch fitting for ø1/4"
N93	SX5000: One-touch fitting for ø5/16" SX3000: One-touch fitting for ø5/32"
N97	SX5000: One-touch fitting for ø5/16" SX3000: One-touch fitting for ø1/4"
M	Mixed

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example



SS5X5-M45-05U-C86····· 1 set (Type M45 manifold base no.)
∗SX3140-5LOZ····· 3 sets (Single solenoid part no.)
∗SX5140-5LOZ····· 2 sets (Single solenoid part no.)
∗The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

They will be assembled in the order listed starting at the first station at the D side even if SUP/EXH block assembly is located at either end.
In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the Manifold Specification Sheet to instruct us.

How to Order Valves

SX 5 2 40 – 5 N L □ □

Series

3	SX3000
5	SX5000

Type of actuation

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

Rated voltage

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

Common specifications

Nil	Positive common
N	Negative common

Note) Put nothing for single grommet style and single without indicator light and surge voltage suppresser.

Electrical entry

Grommet	L plug connector	M plug connector
G: Lead wire length 300 mm lead	**L:** With lead wire (Length 300 mm)	**M:** With lead wire (Length 300 mm)
H: Lead wire length 600 mm	**LN:** Without lead wire	**MN:** Without lead wire
	LO: Without connector	**MO:** Without connector

∗ The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Manual override

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

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

SMC

Plug-in type

This manifold makes it possible to mount SX3000 onto base of SX5000.

How to Order Manifold

Type M45 (Mixed mounting type)

SS5X5 – M45 □ F □ – □ □ □ – C44 – □ – □

Mixed mounting style

Common specifications

Nil	Positive common
N	Negative common

No symbol is used for T, T1, S□ types.

Connector type

Symbol	Mounting position
F	D-sub connector
P	Flat ribbon cable 26 pins
PG	Flat ribbon cable 20 pins
PH	Flat ribbon cable 10 pins
T	Terminal block 9 pins
T1	Terminal block 18 pins
G	Flat ribbon cable (PC wiring system compatible)
S□	Serial transmission type

For details, refer to pages 1-6-82 to 85, 112, 119, 124, and 127.

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Depending on the connector, the number of stations is limited. For details, refer to pages 1-6-82 to 85, 112, 119, 124, and 127.
⋮	⋮	
20	20 stations	

This also includes the number of blanking plate assemblies.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations
M	Special specifications	

∗ For special specifications, indicate separately by the manifold specification sheet.

SUP/EXH block assembly specifications

Symbol	Specifications
Nil	Standard/Internal pilot specifications
S	Built-in silencer

A, B port size

(Metric size)

Symbol	Port size
C44	SX5000: One-touch fitting for ø4 SX3000: One-touch fitting for ø4
C46	SX5000: One-touch fitting for ø4 SX3000: One-touch fitting for ø6
C64	SX5000: One-touch fitting for ø6 SX3000: One-touch fitting for ø4
C66	SX5000: One-touch fitting for ø6 SX3000: One-touch fitting for ø6
C84	SX5000: One-touch fitting for ø8 SX3000: One-touch fitting for ø4
C86	SX5000: One-touch fitting for ø8 SX3000: One-touch fitting for ø6
M	Mixed

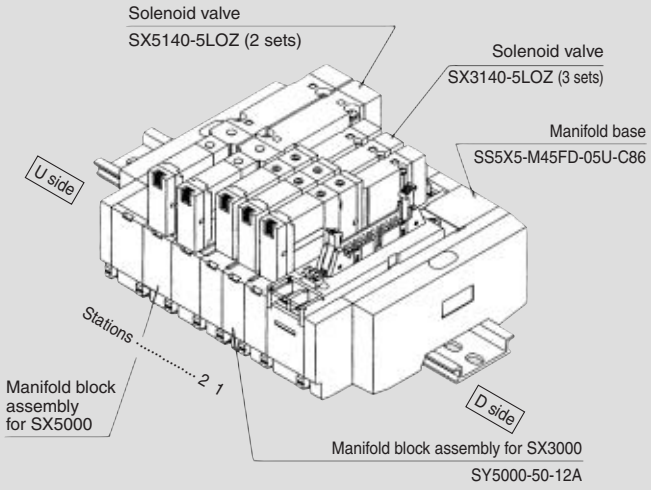
(Inch size)

Symbol	Port size
N33	SX5000: One-touch fitting for ø5/32" SX3000: One-touch fitting for ø5/32"
N37	SX5000: One-touch fitting for ø5/32" SX3000: One-touch fitting for ø1/4"
N73	SX5000: One-touch fitting for ø1/4" SX3000: One-touch fitting for ø5/32"
N77	SX5000: One-touch fitting for ø1/4" SX3000: One-touch fitting for ø1/4"
N93	SX5000: One-touch fitting for ø5/16" SX3000: One-touch fitting for ø5/32"
N97	SX5000: One-touch fitting for ø5/16" SX3000: One-touch fitting for ø1/4"
M	Mixed

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example



SS5X3-M45FD-05U-C86····· 1 set (Type M45 manifold base no.)
∗SX3140-5LOZ····· 3 sets (Single solenoid part no.)
∗SX5140-5LOZ····· 2 sets (Single solenoid part no.)
∗ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

They will be assembled in the order listed starting at the first station at the D side even if SUP/EXH block assembly is located at either end.
In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the Manifold Specification Sheet to instruct us.

How to Order Valves

SX 3 2 40 – 5 □ LOZ □

Series

3	SX3000
5	SX5000

Type of actuation

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

Voltage

Nil	24 VDC
12V	12 VDC

No symbol is used for T, T1, S□ types. For details, refer to pages 1-6-83, 84, 112, 119, 124, and 127.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

Rated voltage

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

∗ mark: Type 45T and T1 only S□ type: 24 VDC only

Common specifications

Nil	Positive common
N	Negative common

∗ Common specifications for the valve must correspond with common specifications for the manifold.

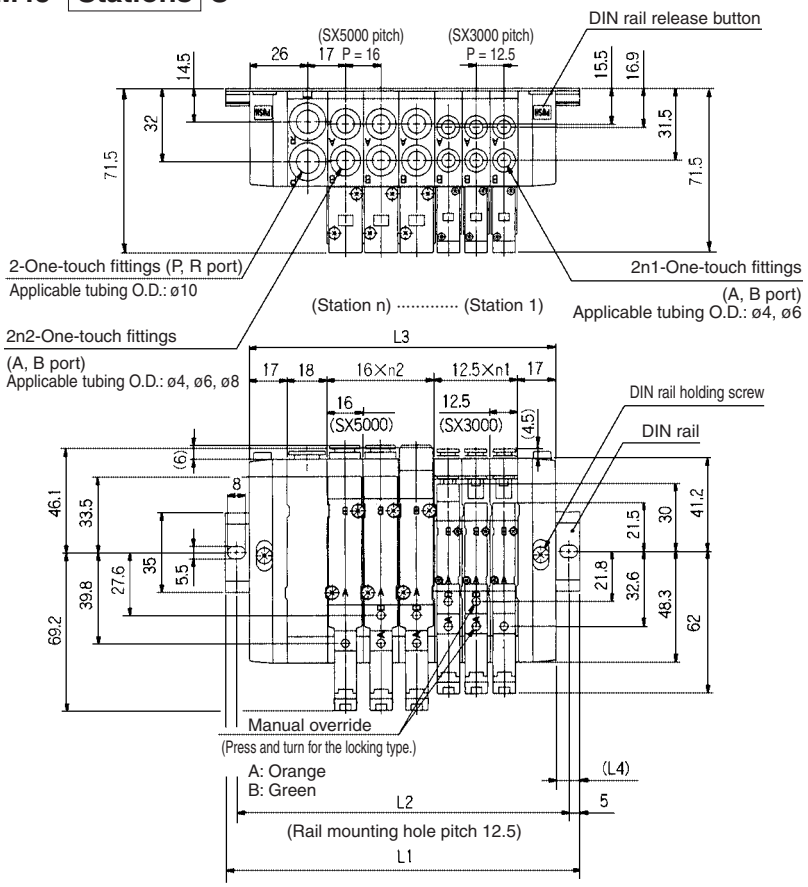
Manual override

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

(Non plug-in type)

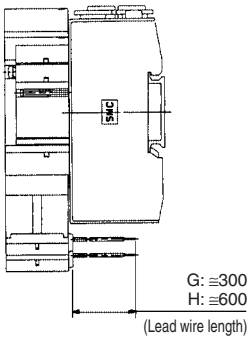
Dimensions: Mixed Mounting

SS5X5-M45- Stations U

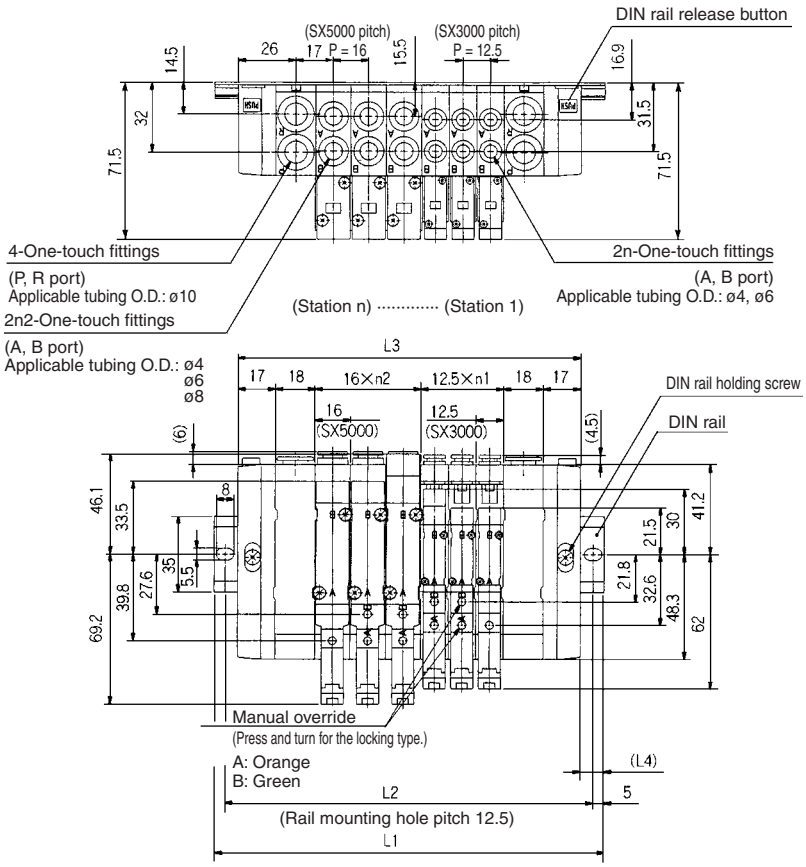


L dimension: Formulae for L1 to L4
L3 = 12.5 x n1 + 16 x n2 + 52
$M = (\frac{L3}{12.5} + 1)$ Omit decimals
L1 = 12.5 x M + 23
L2 = L1 – 10.5
L4 = (L1 – L3)/2

n1: Number of SX3000's stations
n2: Number of SX5000's stations



SS5X5-M45- Stations B



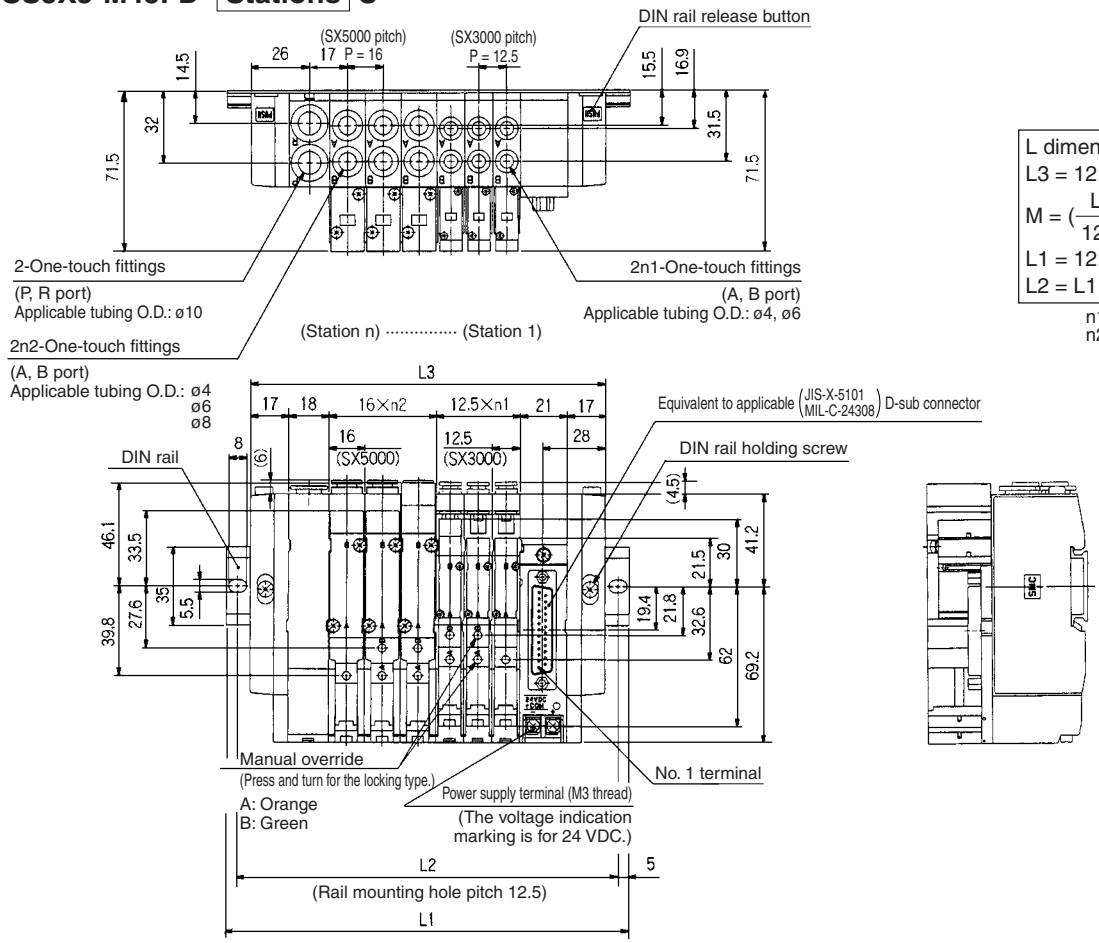
L dimension: Formulae for L1 to L4
L3 = 12.5 x n1 + 16 x n2 + 70
$M = (\frac{L3}{12.5} + 1)$ Omit decimals
L1 = 12.5 x M + 23
L2 = L1 – 10.5
L4 = (L1 – L3)/2

n1: Number of SX3000's stations
n2: Number of SX5000's stations

(Non plug-in type)

Dimensions: Mixed Mounting

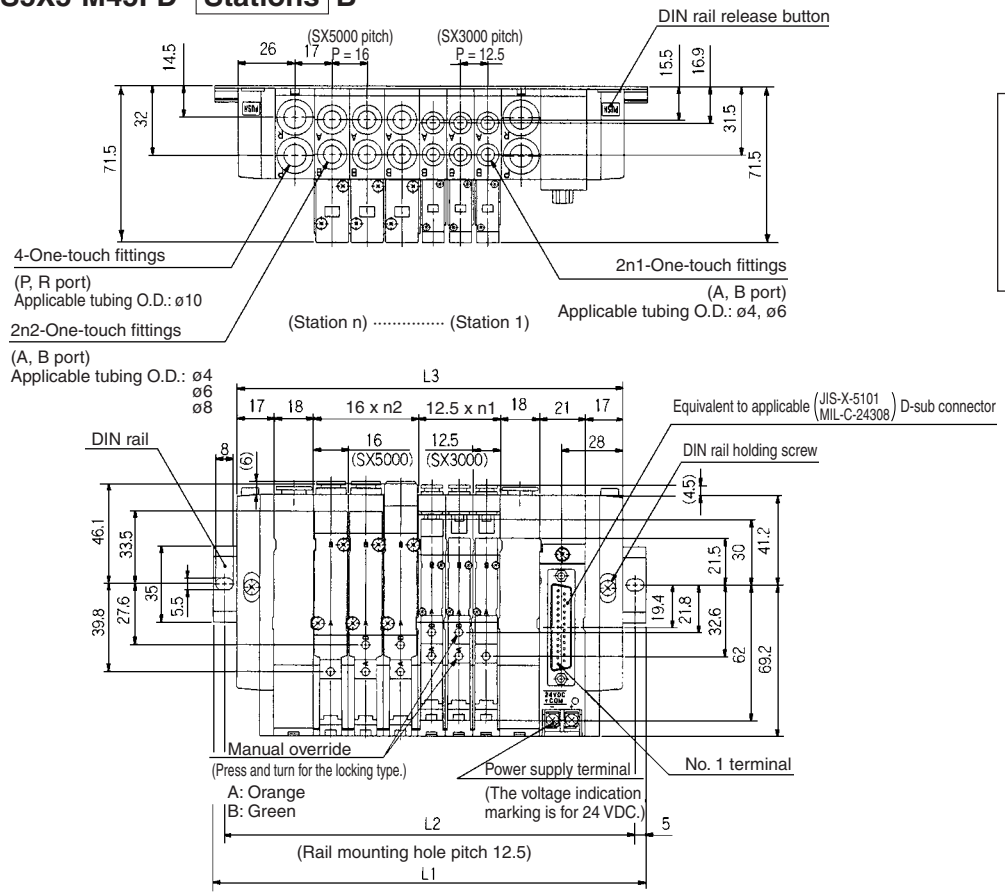
SS5X5-M45FD- Stations U



L dimension: Formulae for L1 to L3
L3 = 12.5 x n1 + 16 x n2 + 73
$M = (\frac{L3}{12.5} + 1)$ Omit decimals
L1 = 12.5 x M + 23
L2 = L1 – 10.5

n1: Number of SX3000's stations
n2: Number of SX5000's stations

SS5X5-M45FD- Stations B



L dimension: Formulae for L1 to L4
L3 = 12.5 x n1 + 16 x n2 + 91
$M = (\frac{L3}{12.5} + 1)$ Omit decimals
L1 = 12.5 x M + 23
L2 = L1 – 10.5
L4 = (L1 – L3)/2

n1: Number of SX3000's stations
n2: Number of SX5000's stations

Series SX3000/5000/7000
Made to Order Specifications:

Symbol

Main Valve Fluoro Rubber Specifications -X90

Fluoro rubber is used for rubber parts of the main valve to allow use in applications such as the following.

1. When using a lubricant other than the recommended turbine oil, and there is a possibility of malfunction due to swelling of the spool valve seals.
2. When ozone enters or is generated in the air supply.

Applicable solenoid valves: Series SX3□$^{2}_{4}$0, SX5□$^{2}_{4}$0, SX7□$^{2}_{4}$0

Model no. SX$^{3}_{5}_{7}$ □ $^{20}_{40}$ – □□□□ – □ – □ – **X90**

● **Entry is the same as standard products.**

The specifications and performance are the same as those of standard models.

Note) Because in series -X90 fluoro rubber is used for only main valve, the rubber parts of the application/usage in conditions requiring heat resistance should be avoided.