

Series SY3000/5000 Base Mounted Monifold Stacking Type/DIN Rail Mounted Individual Wiring

How to Order Manifold

SS5Y 3 - 45 - 05 U - C6

Series	Valve stations
3 SY3000	02 2 stations
5 SY5000	20 20 stations

SUP/EXH block assembly mounting position

Symbol	Mounting position	Applicable no. of 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 on the manifold specification sheet.

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø 5/32"	SY3000
N7	One-touch fitting for ø 1/4"	
M	Mixed	
N3	One-touch fitting for ø 5/32"	SY5000
N7	One-touch fitting for ø 1/4"	
N9	One-touch fitting for ø 5/16"	
M	Mixed	

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

Option

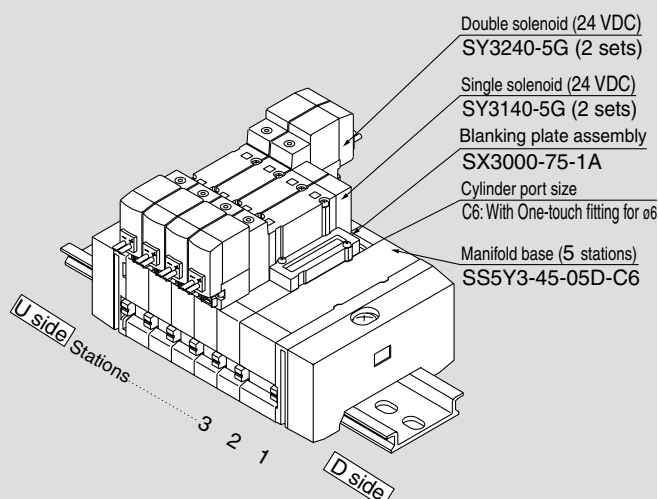
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)



For external pilot specifications and built-in silencer, refer to catalog on page 1-4-194.

How to Order Valve Manifold Assembly

Ordering example



SS5Y3-45-05D-C6 1 set (Type 45, 5 stations manifold base part no.)
*** SX3000-75-1A** 1 set (Blanking plate assembly part no.)
*** SY3140-5G** 2 sets (Single solenoid part no.)
*** SY3240-5G** 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

SY 5 2 40 5 L

Series

3	SY3000
5	SY5000

Type of actuation

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

Coil specifications

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

* Power saving circuit is not available in the case of "D", "DO" or "W□" type.

Rated voltage

DC

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

AC (Hz) 50/60

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

* DC specifications of type "D" and "DO" is only available with 12 and 24 VDC.
 * For type "W□", DC voltage is only available.
 * "D" and "DO" only available for SY5000.

Manual override

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

Light/Surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry for D

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

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

Electrical entry

24, 12, 6, 5, 3 VDC/100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
G: Lead wire length 300 mm 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	(SY5000) D: With connector DO: Without connector	WO: Without connector cable

* "LN", "MN" type: with 2 sockets.
 * D and DO only available for SY5000.
 * DIN terminal type "Y" conforming to DIN43650C standard is also available. For details, refer to page 1-4-201.
 * For connector cable of M8 connector, refer to page 1-4-209.

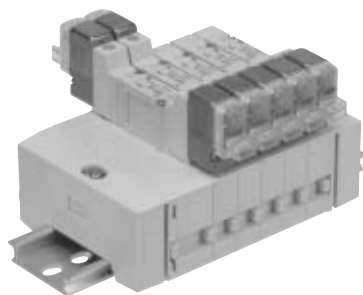
SV

SZ

SY

SYJ

SX



Manifold Specifications

Model		SS5Y3-45	SS5Y5-45
Applicable valve		SY3□40	SY5□40
Manifold type		Stacking type/DIN rail mounted	
P (SUP)/R (EXH)		Common SUP, Common EXH	
Valve stations		2 to 20 stations ^{Note 1)}	
A, B port Porting 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)	C4 (One-touch fitting for ø4)
		C6 (One-touch fitting for ø6)	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 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.

Flow Characteristics

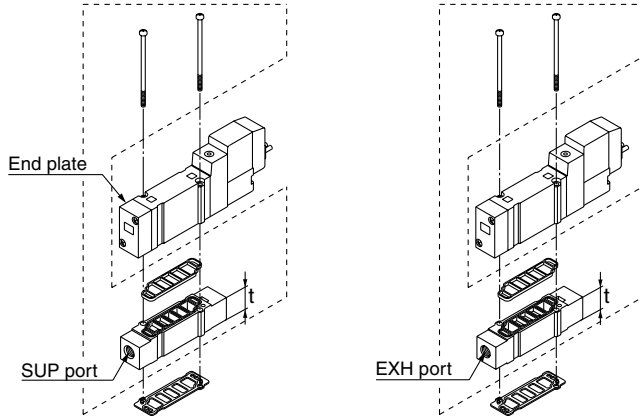
Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /s·bar)	b	Cv	C (dm ³ /s·bar)	b	Cv
SS5Y3-45	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58



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

Manifold Option

Individual SUP spacer assembly Individual EXH spacer assembly



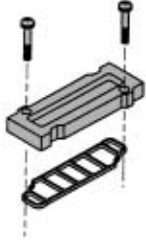
Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A	M5 x 0.8	11
SY5000	SY5000-38-16*A	1/8	15

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

Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A	M5 x 0.8	11
SY5000	SY5000-39-16*A	1/8	15

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

Blanking plate assembly



Series	Assembly part no.
SY3000	SX3000-75-1A
SY5000	SX5000-76-1A

* Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Caution

Mounting screw tightening torques

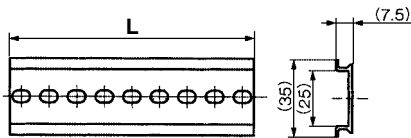
M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

Dimensions/DIN rail

VZ1000-11-1-□

Refer to L dimensions

* Fill in □ 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					

* Refer to L1 dimension on pages starting with page 1-4-126 for lengths that correspond to the number of manifold stations.

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.
SY3000	SX3000-77-1A
SY5000	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.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

L Label for block disk

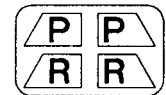
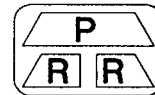
The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

Label for SUP block disk

Label for EXH block disk

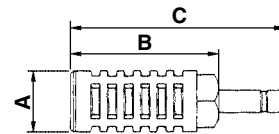
Label for SUP/EXH block disk



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

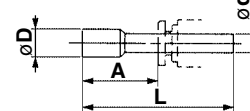
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm ²	ø16	26	51
For SY5000 (ø10)	AN200-KM10	26 mm ²	ø22	53.8	80.8
	AN300-KM10	30 mm ²	ø25	70	97

L Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



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
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

Manifold Option

How to Order Interface Regulator (SY3000/5000 only)

Series SY3000

ARBY3000-05-P-2

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Pressure gauge connection port

05	Pressure gauge (G15-10-01) [for odd number station]
06	Pressure gauge (G15-10-01) [for even number station]
M1	Plug (M-5P)

* In the case of Series ARBY3000 with a pressure gauge when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no.

Series SY5000

ARBY5000-00-P-2

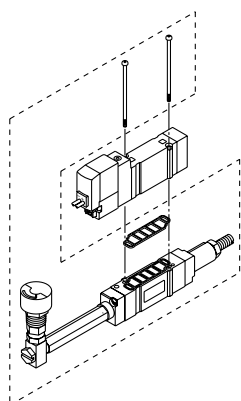
Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

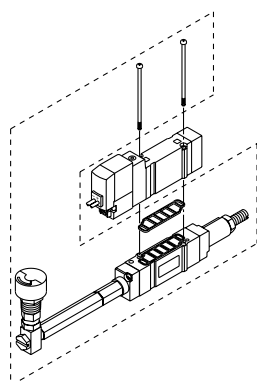
Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

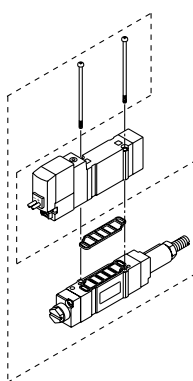
ARBY3000-05-□-2
(For mounting odd number stations)



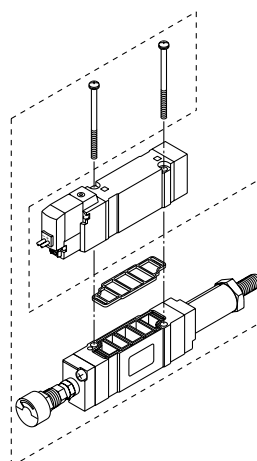
ARBY3000-06-□-2
(For mounting even number stations)



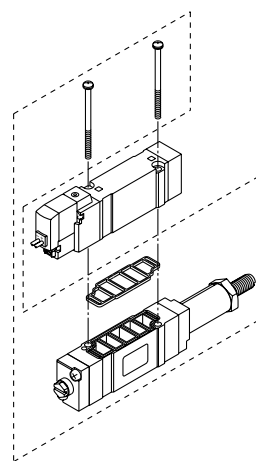
ARBY3000-M1-□-2



ARBY5000-00-□-2



ARBY5000-M1-□-2



Accessory

Series	Round head combination screw	Gasket
ARBY3000	SY3000-23-10 (M2336)	SX3000-57-4
ARBY5000	M3 x 48.5, Matt nickel plated	SX5000-57-6

Caution

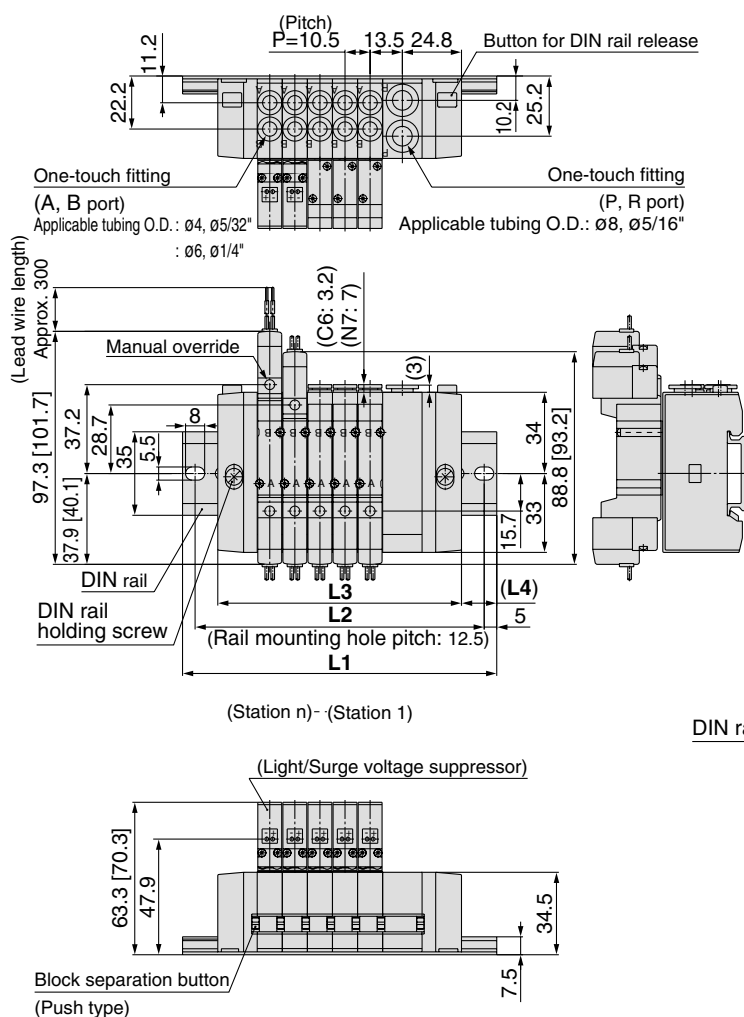
Mounting screw tightening torques

M2: 0.17 N·m
M3: 0.8 N·m

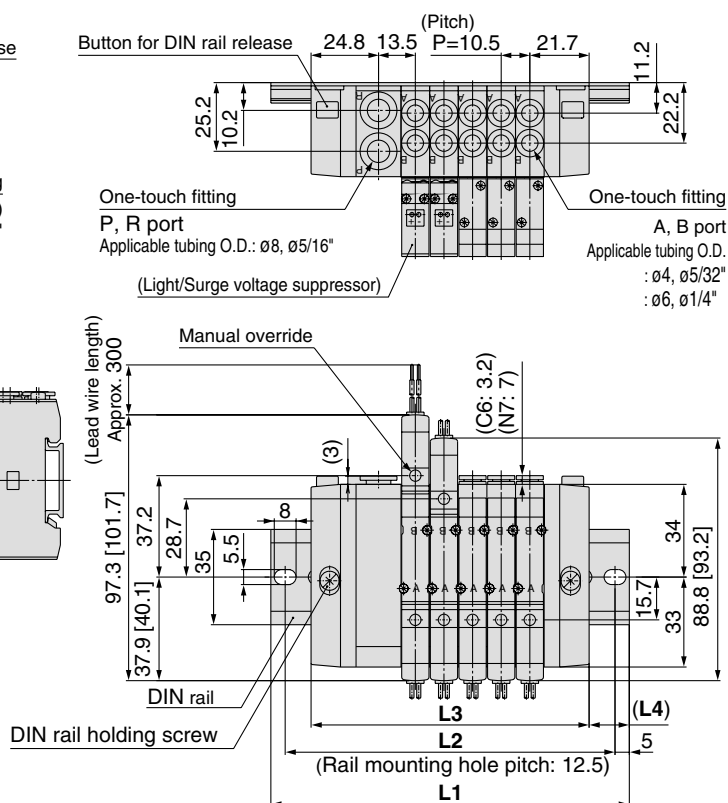
Dimensions: Series SY3000



SS5Y3-45- Stations D-C4, N3 C6, N7

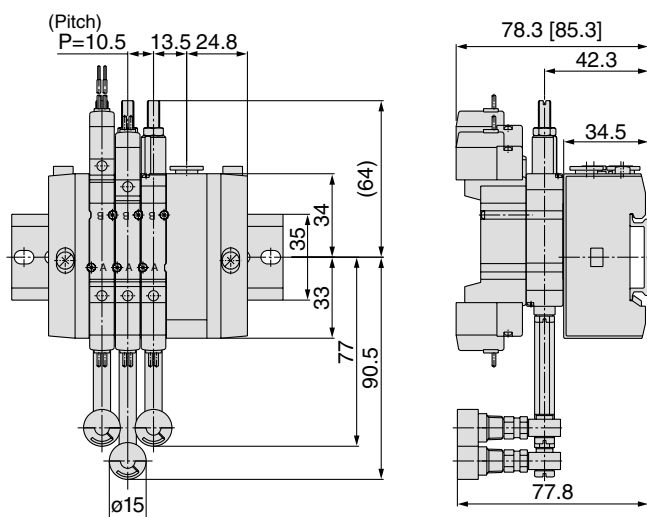


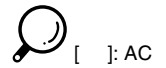
SS5Y3-45- Stations U-C4, N3 C6, N7



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	98	110.5	123	135.5	148	148	160.5	173	185.5
L2	87.5	100	112.5	125	137.5	137.5	150	162.5	175
L3	70.5	81	91.5	102	112.5	123	133.5	144	154.5
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

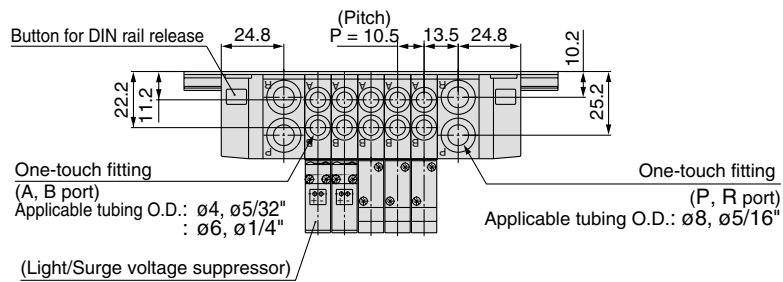
With interface regulator (with gauge)



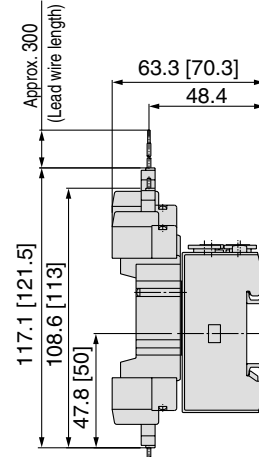


Dimensions: Series SY3000

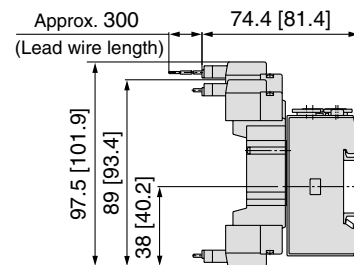
SS5Y3-45- Stations B- C4, N3 C6, N7



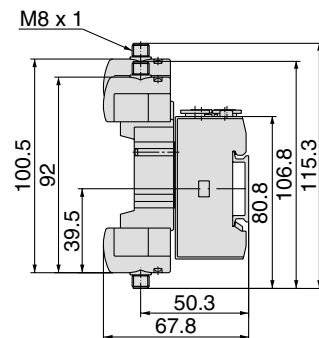
L plug connector



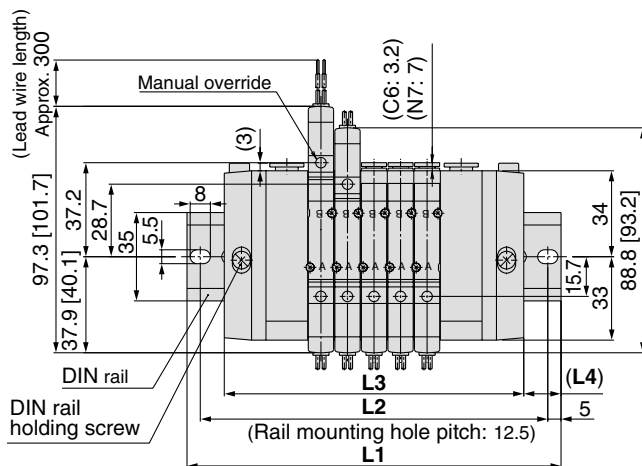
M plug connector



M8 connector (WO)



Note) Refer to page 1-4-210 for dimensions of connector types.



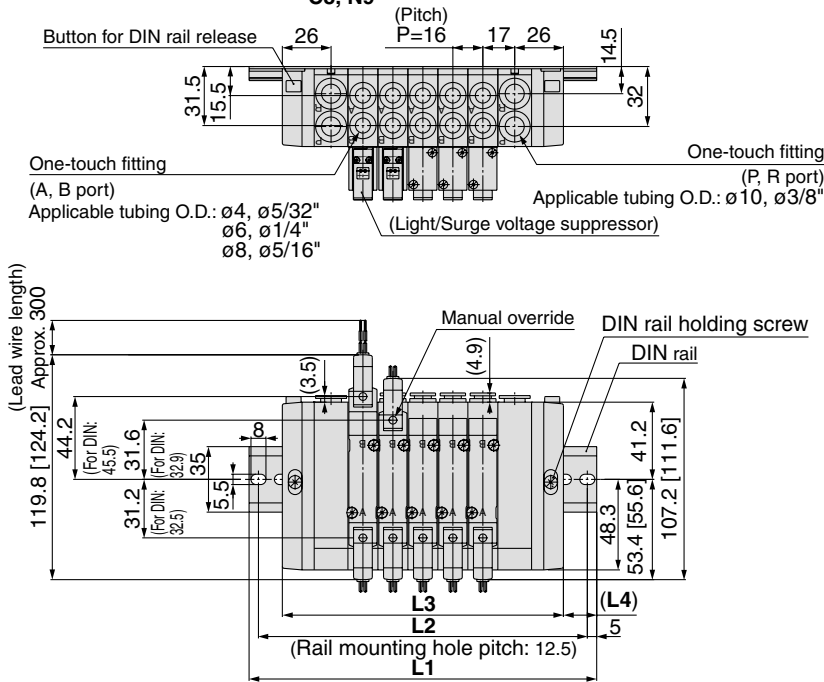
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	110.5	123	135.5	148	160.5	173	185.5	185.5	198
L2	100	112.5	125	137.5	150	162.5	175	175	187.5
L3	87	97.5	108	118.5	129	139.5	150	160.5	171
L4	11.5	12.5	13.5	14.5	15.5	16.5	17.5	12.5	13.5

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5
L2	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	181.5	192	202.5	213	223.5	234	244.5	255	265.5	276
L4	14.5	15.5	16.5	17.5	12	13	14	15	16	17

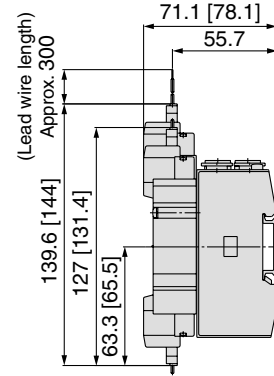
Dimensions: Series SY5000



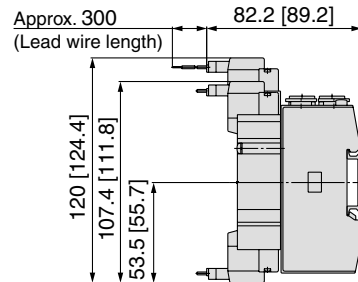
SS5Y3-45- Stations B-C4, N3 C6, N7 C8, N9



L plug connector



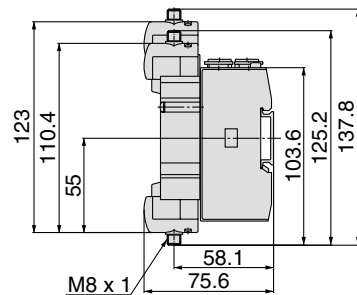
M plug connector



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

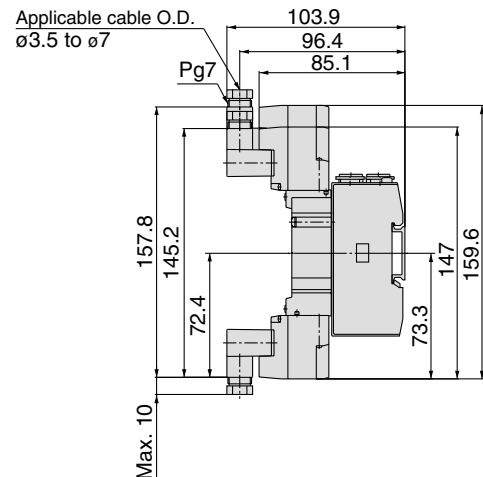
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423
L2	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5
L3	246	262	278	294	310	326	342	358	374	390
L4	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5

M8 connector (WO)



Note) Refer to page 1-4-210 for dimensions of connector types.

DIN terminal (D)



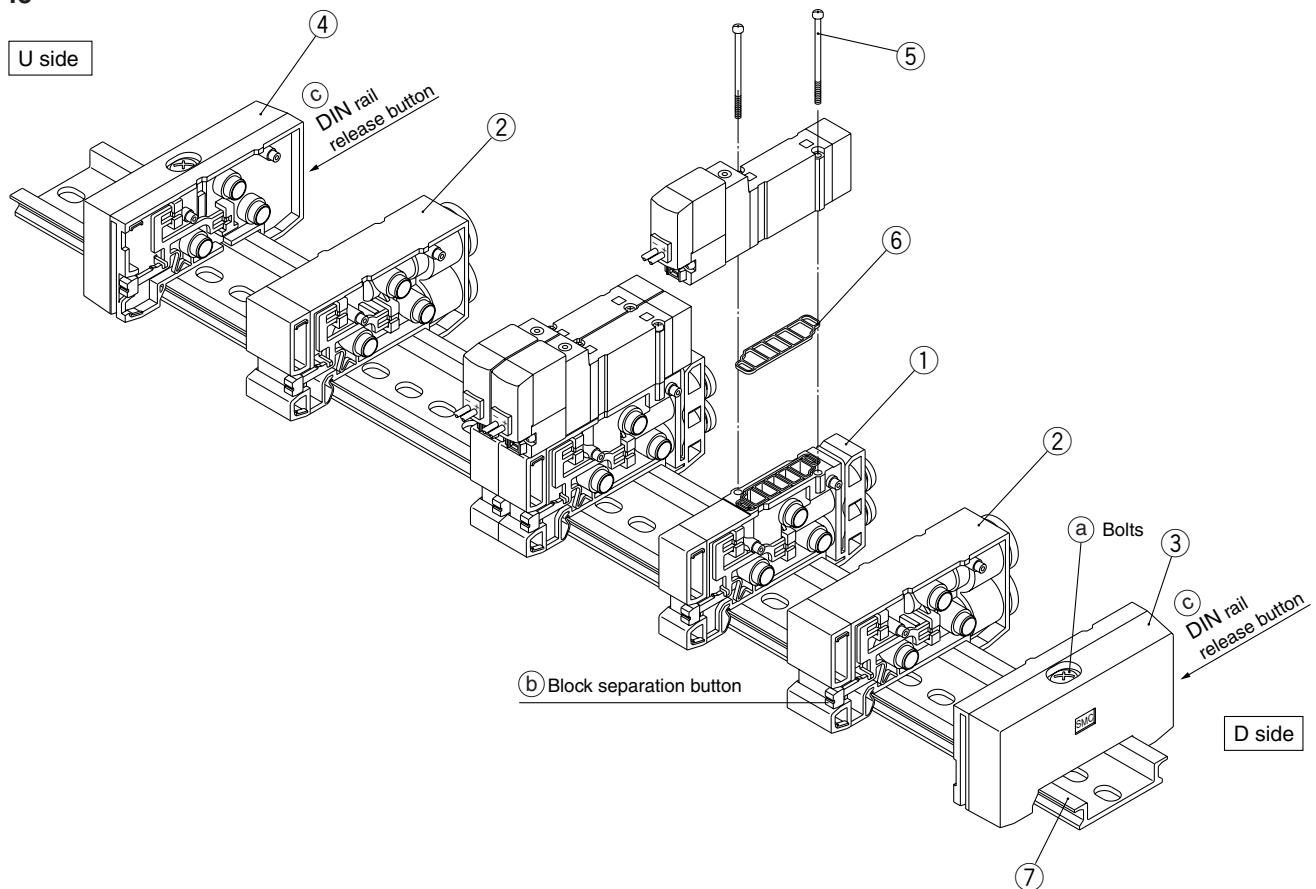
SV

SZ

SY

SYJ

SX

DIN Rail Manifold Exploded View**Type 45****Replacement Parts**

No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly	SX3000-50-1A-□□	SX5000-50-1A-□□	□□: SY3000 (Metric size) C4: With One-touch fitting for ø4 (Inch size) N3: With One-touch fitting for ø 5/32" SY5000 (Metric size) C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø 1/4" C4: With One-touch fitting for ø4 (Inch size) N3: With One-touch fitting for ø 5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø 1/4" C8: With One-touch fitting for ø8 N9: With One-touch fitting for ø 5/16" (Gasket 6 is supplied as an accessory.)
②	SUP/EXH block assembly	(Metric size) SX3000-51-1A (Inch size) SX3000-51-15A	(Metric size) SX3000-51-1A (Inch size) SX5000-51-15A	P, R port SY3000 (Metric size) With One-touch fitting for ø8 (Inch size) With One-touch fitting for ø5/16" P, R port SY5000 (Metric size) With One-touch fitting for ø10 (Inch size) With One-touch fitting for ø3/8"
③	End block assembly R	SX3000-52-1A	SX5000-52-1A	For D side
④	End block assembly R	SX3000-53-1A	SX5000-53-1A	For U side
⑤	Round head combination screw	SY3000-23-4	M3 x 26 (Matt nickel plated)	
⑥	Gasket	SX3000-57-4	SX5000-57-6	
⑦	DIN rail	VZ1000-11-1-□		Refer to page 1-4-123.

DIN Rail Manifold Exploded View

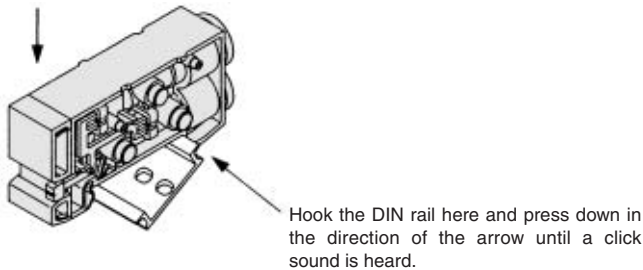
How to Increase Manifold Base Station expansion is possible at any position.

- 1 Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons (c), at two locations, separate the manifold base from the DIN rail.)
- 2 Press manifold block assembly dividing 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 Fig. (1).
- 4 Press the block assemblies 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 for better sealing.)

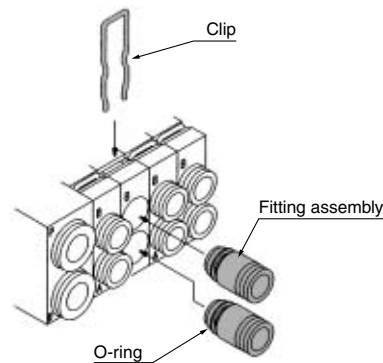
⚠ Caution

- Note 1) When there are 10 or fewer manifold block assemblies, and more are added to make a total of 11 or more, a supply/exhaust block assembly must also be added.
- Note 2) When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate. Before supplying air, confirm that there are no gaps, etc. between blocks, and that manifold blocks are securely fastened to the DIN rail. Then supply air and confirm that there is no air leakage before operating.

Fig. (1) Block mounting procedure



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, etc. For mounting a new fitting assembly, insert it and then insert a clip until it will not come out of the manifold block.

Fitting Assembly Part No.

Metric size

SY3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SY5000	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

SY3000	One-touch fitting for ø5/32"	VVQ1000-50A-N3
	One-touch fitting for ø 1/4"	VVQ1000-50A-N7
SY5000	One-touch fitting for ø5/32"	VVQ1000-51A-N3
	One-touch fitting for ø 1/4"	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.

SV

SZ

SY

SYJ

SX

Type **45-A** NA

Series SY3000/5000 Base Mounted Manifold Stacking Type/DIN Rail Mounted Connector Box

How to Order Manifold

SS5Y **3** - 45 - **A** **U** - 05 **D** - C6

Series

3	SY3000
5	SY5000

Specifications

Symbol	Specifications
A	With connector box (+COM spec.)
NA	With connector box (-COM spec.)

The style of attached lead wire assembly is different.

Connector box mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Applicable up to 16 solenoid valves.
:	:	
16	16 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 16 stations
M*	Special specifications	

* For special specifications, indicate separately on the manifold specification sheet.

A/B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for $\phi 4$	SY3000
C6	One-touch fitting for $\phi 6$	
M	Mixed	
C4	One-touch fitting for $\phi 4$	SY5000
C6	One-touch fitting for $\phi 6$	
C8	One-touch fitting for $\phi 8$	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for $\phi^{5/32}$ "	SY3000
N7	One-touch fitting for $\phi^{1/4}$ "	
M	Mixed	
N3	One-touch fitting for $\phi^{5/32}$ "	SY5000
N7	One-touch fitting for $\phi^{1/4}$ "	
N9	One-touch fitting for $\phi^{9/32}$ "	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

Option

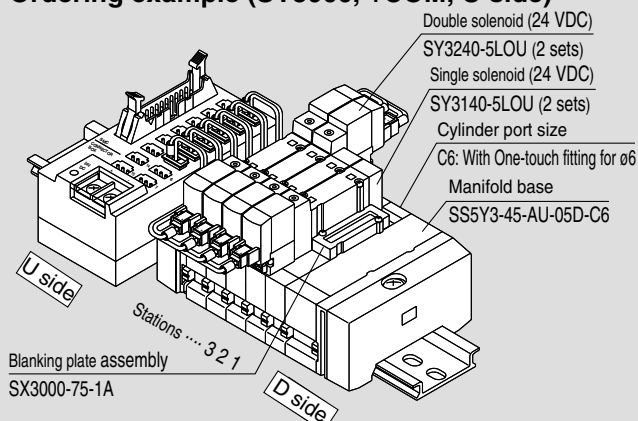
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (Max. 20 stations)



For external pilot specifications and built-in silencer, refer to page 1-4-194.

How to Order Valve Manifold Assembly

Ordering example (SY3000, +COM, U side)



SS5Y3-45-AU-05D-C6	1 set (Type 45, 5 stations manifold base part no.)
* SX3000-75-1A	1 set (Blanking plate assembly part no.)
* SY3140-5LOU	2 sets (Single solenoid part no.)
* SY3240-5LOU	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 connector box. 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.

SS5Y₅-45-A_U-□□□-C□ is assembled with solenoid valve and lead wire assembly when shipping. When ordering manifold only (without valves/wires/options), refer to how to order on page 1-4-120 and list the connector box (VZ3000-106-1A) and the rail stopper (TXE1-SMC) below the manifold to allow for the connector box mounting at U side. (Be sure to order DIN rail 3 station longer than number of the manifold stations.) In this case, please note that dimensions, L1 and L2 on pages 1-4-136 and 1-4-137 may vary slightly.) For other components, refer to page 1-4-138.

How to Order Valves

SY **5** **2** 40 - 5 LOU

Series

3	SY3000
5	SY5000

Type of actuation

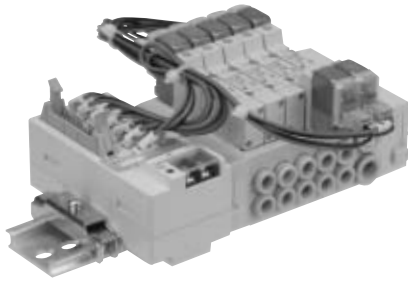
1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Manual override

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

Rated voltage

5	24 VDC
---	--------



Manifold Specifications

Model		SS5Y3-45-A _{NA}	SS5Y5-45-A _{NA}
Applicable valve		SY3□40	SY5□40
Manifold type		Stacking type/DIN rail mounted	
P (SUP)/R (EXH)		Common SUP, Common EXH	
Valve stations		2 to 16 stations <small>Note 1, 2)</small>	
A, B port Porting specifications	Location	Base	
	Direction	Side	
	P, R port	C8 (One-touch fitting for ø8)	C10 (One-touch fitting for ø10)
Port size	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 = 26n + 207 11 to 20 stations: W = 26n + 229	2 to 10 stations: W = 52n + 245 11 to 16 stations: W = 52n + 279
Applicable flat ribbon cable connector		Flat ribbon cable connector Socket: 20 pins MIL type with strain relief conforming to MIL-C-83503	
Wiring specifications		+COM specifications (Type 45-A), -COM specifications (Type 45-NA)	



Note 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.

Note 2) There is a limit depending on the number of solenoids. Refer to "How to Order".

Flow Characteristics

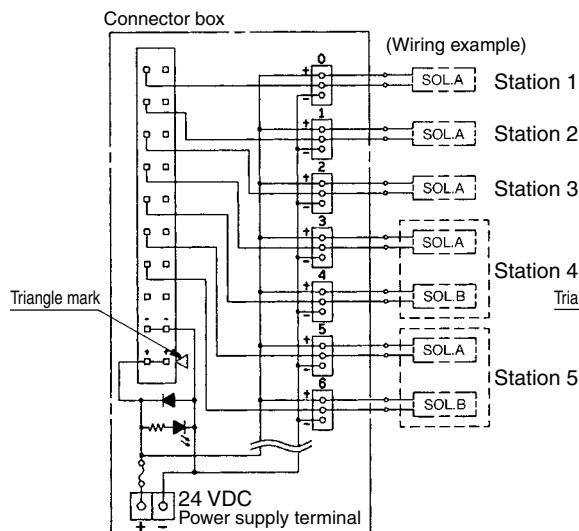
Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y3-45-□	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45-□	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58



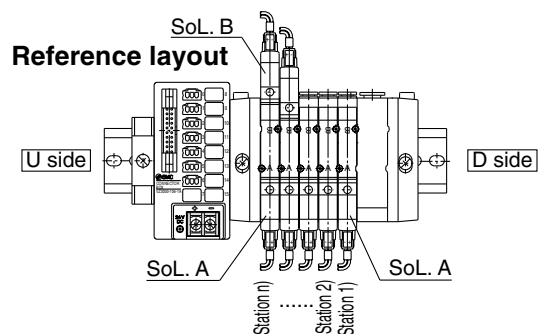
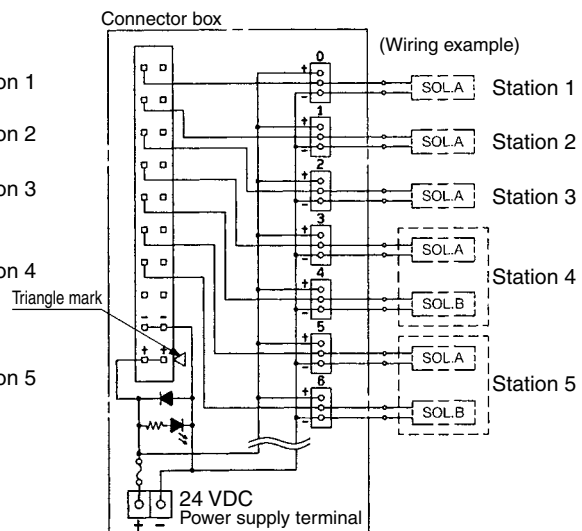
Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Manifold Wiring Diagram (Circuit diagram for the reference layout)

+COM electric circuit diagram



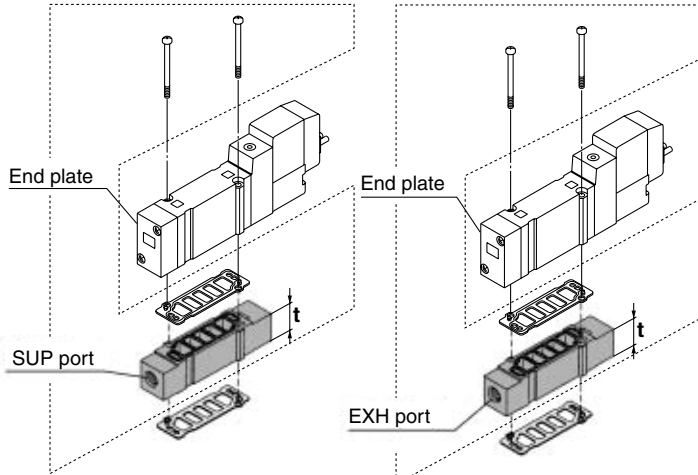
-COM electric circuit diagram



- Connector box for +COM allows transmission until G71-OD16, manufactured by OMRON Corp., to be connected directly for serial transmission. Additionally, it can also be used for the PC wiring system.
- When an external power source must be supplied to the manifold, correct polarity must be observed, otherwise damage to PLC is possible.
- The wiring of solenoid valves, corresponds with the labeled connector box 0 to 15 from D side.
- If valves other than non-polar type are used, this may cause malfunction.

Manifold Option

Individual SUP spacer assembly ■ Individual EXH spacer assembly



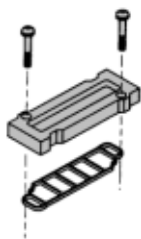
Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A	M5 x 0.8	11
SY5000	SY5000-38-16-A	1/8"	15

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.)

Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A	M5 x 0.8	11
SY5000	SY5000-39-16-A	1/8"	15

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.)

Blanking plate assembly



Series	Assembly part no.
SY3000	SX3000-75-1A
SY5000	SX5000-76-1A

* Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Caution

Mounting screw tightening torques

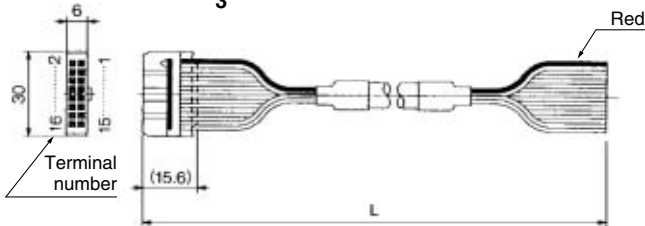
M2: 0.16 N·m

M3: 0.8 N·m

M4: 1.4 N·m

Cable assembly

AXT100-FC20-1
3



Connector Assembly for Flat Ribbon Cable

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-FC20-1	Cable 20 core x 22 AWG
3 m	AXT100-FC20-2	
5 m	AXT100-FC20-3	

* For other commercial connectors, use a 20 pins with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

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

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, and then mount it.

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.
SY3000	SX3000-77-1A
SY5000	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.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

Label for block disk

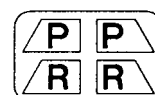
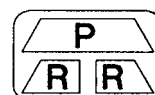
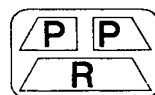
The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

Label for SUP block disk

Label for EXH block disk

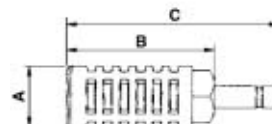
Label for SUP/EXH block disk



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

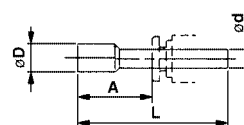
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm ²	ø16	26	51
For SY5000 (ø10)	AN200-KM10	26 mm ²	ø22	53.8	80.8
	AN300-KM10	30 mm ²	ø25	70	97

Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



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
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

Manifold Option

▪ How to Order Interface regulator (SY3000, 5000 only)

Series SY3000

ARBY3000-05-P-2

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Pressure gauge connection port

05	Pressure gauge (G15-10-01) [for odd number station]
06	Pressure gauge (G15-10-01) [for even number station]
M1	Plug (M-5P)



* In the case of Series ARBY3000 with a pressure gauge when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no. stations to avoid gauges from interfering from each others.

Series SY5000

ARBY5000-00-P-2

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

SV

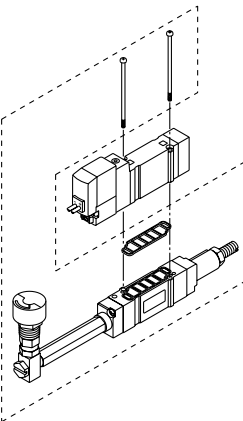
SZ

SY

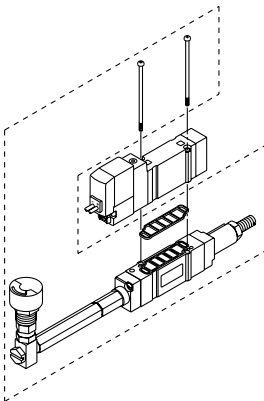
SYJ

SX

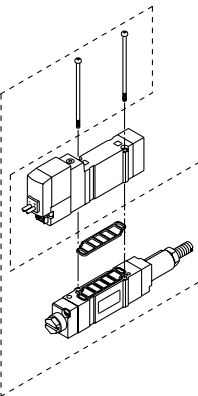
ARBY3000-05-□-2
(For odd number stations)



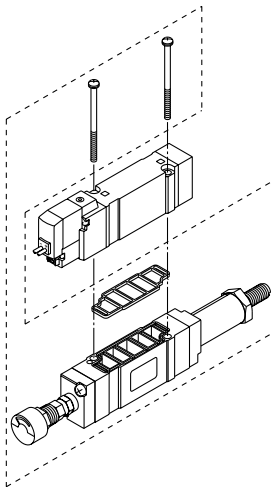
ARBY3000-06-□-2
(For even number stations)



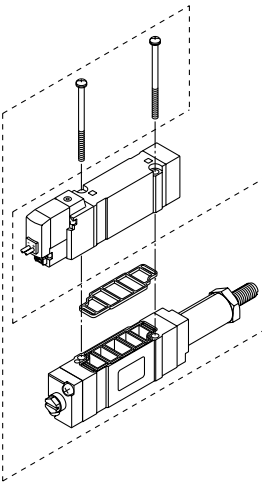
ARBY3000-M1-□-2



ARBY5000-00-□-2



ARBY5000-M1-□-2



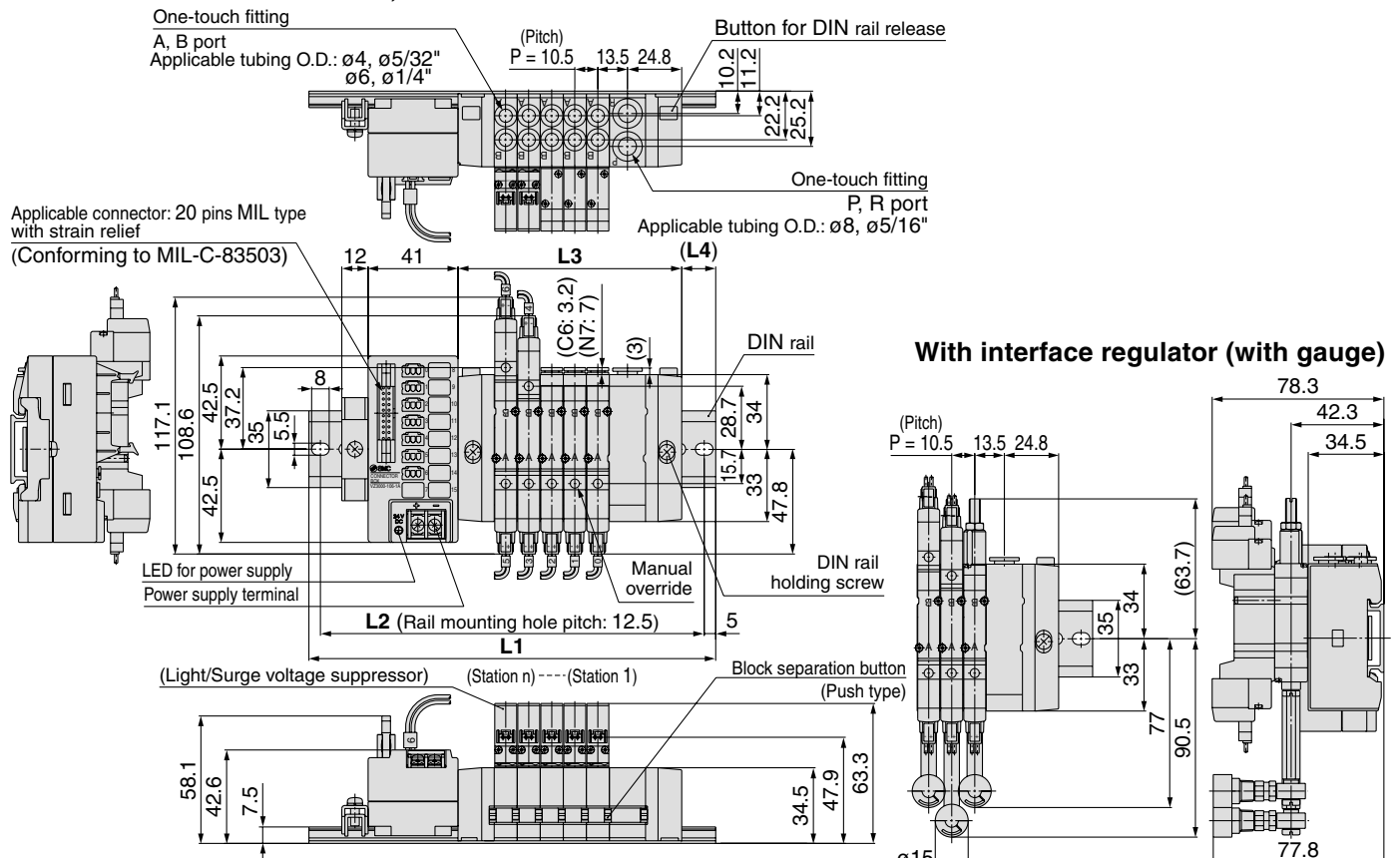
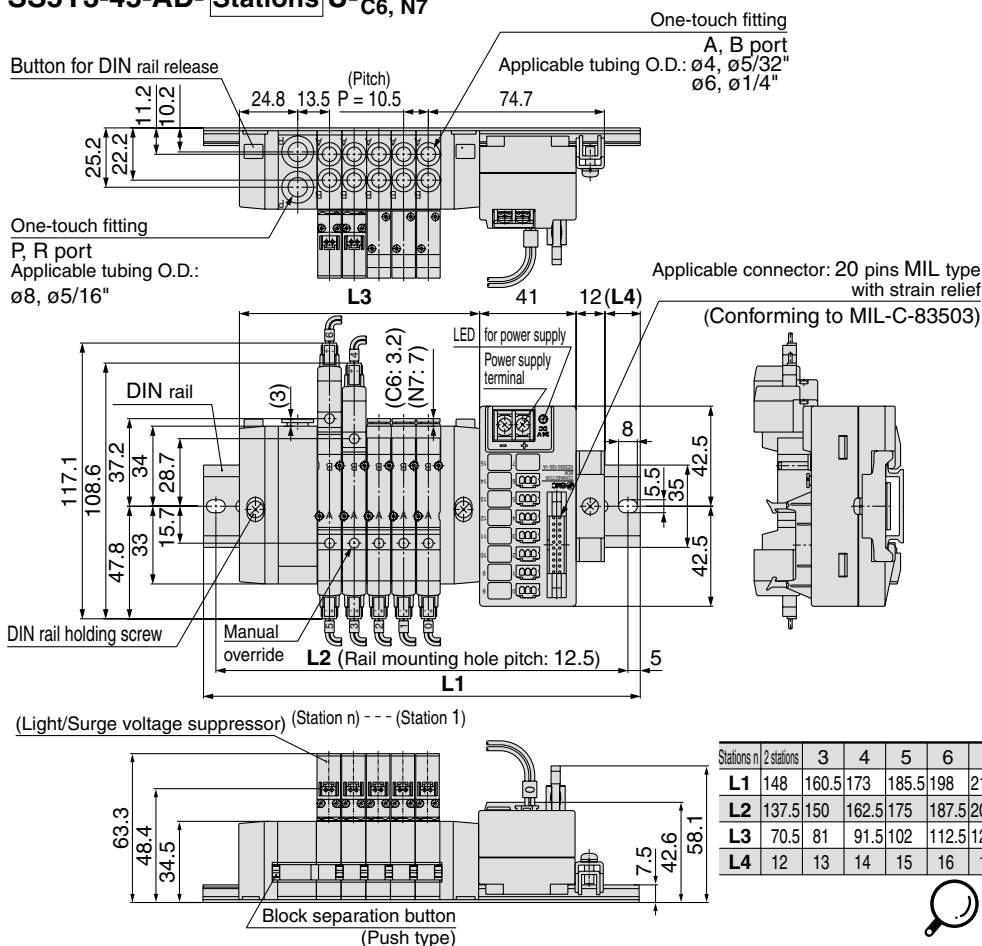
Accessory

Series	Round head combination screw	Gasket
ARBY3000	SY3000-23-10 (M2 x 36)	SX3000-57-4
ARBY5000	M3 x 48.5, Matt nickel plated	SX5000-57-6

⚠ Caution

Mounting screw tightening torques

M2: 0.16 N·m
M3: 0.8 N·m

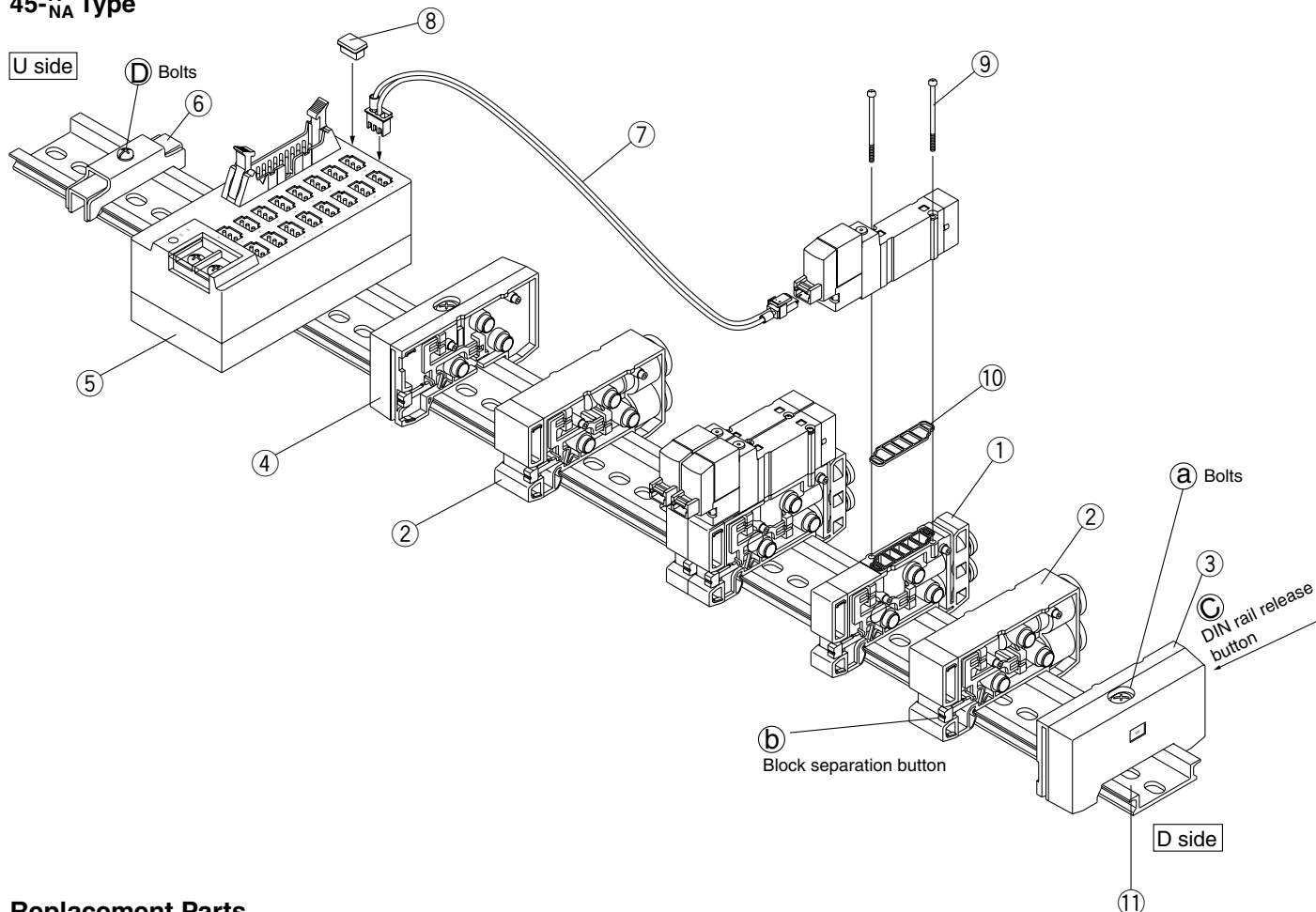
Dimensions: Series SY3000**SS5Y3-45-AU- Stations D- C4, N3
C6, N7****SS5Y3-45-AD- Stations U- C4, N3
C6, N7**

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	148	160.5	173	185.5	198	210.5	210.5	223	235.5	260.5	273	285.5	298	310.5	310.5
L2	137.5	150	162.5	175	187.5	200	200	212.5	225	250	262.5	275	287.5	300	300
L3	70.5	81	91.5	102	112.5	123	133.5	144	154.5	181.5	192	202.5	213	223.5	234
L4	12	13	14	15	16	17	12	13	14	13	14	15	16	17	11.5



* Two SUP/EXH blocks are provided for models with 11 stations or more.

DIN Rail Manifold Exploded View

45-^A_{NA} Type

Replacement Parts

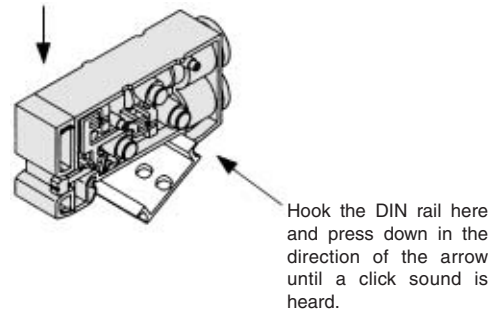
No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly	SX3000-50-1A-□□	SX5000-50-1A-□□	•SY3000 (Metric size) (Inch size) C4: With One-touch fitting for ø4 N3: With One-touch fitting for ø5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø1/4" For SY5000 (Metric 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 10 is supplied as an accessory.)
②	SUP/EXH block assembly	(Metric size) SX3000-51-1A (Inch size) SX3000-51-15A	(Metric size) SX3000-51-1A (Inch size) SX5000-51-15A	P, R port SY3000 (Metric size) With One-touch fitting for ø8 (Inch size) With One-touch fitting for ø5/16" P, R port SY5000 (Metric size) With One-touch fitting for ø10 (Inch size) With One-touch fitting 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	Connector box	VZ3000-106-1A		For 24 VDC only
⑥	Rail stopper	TXE1-SMC		Made by Kasuga Electric Works, Ltd.
⑦	Connector assembly	SY3000-43-1A-□	SY3000-43-2A-□	+COM Type D, 2 to 8 stations Type U, 9 to 16 stations
		SY3000-43-2A-□	SY3000-43-3A-□	+COM Type D, 9 to 16 stations Type U, 2 to 8 stations
		SY3000-43-1NA-□	SY3000-43-2NA-□	-COM Type D, 2 to 8 stations Type U, 9 to 16 stations
		SY3000-43-2NA-□	SY3000-43-3NA-□	-COM Type D, 9 to 16 stations Type U, 2 to 8 stations
⑧	Dust cap	VZ3000-63-2		
⑨	Round head combination screw	SY3000-23-4	M3 x 26, Matt nickel plated	
⑩	Gasket	SX3000-57-4	SX5000-57-6	
⑪	DIN rail	VZ1000-11-1-□		Refer to page 1-4-123.

How to Increase Manifold Base

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 releasing buttons (c), at two locations, separate the manifold base from the DIN rail.)
- 2 Press manifold block assembly dividing 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 Fig. (1).
- 4 Press the block assemblies 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.)
- 5 Untighten the rail stopper bolt (d) to demount the connector box from the DIN rail, and when remounting it, tighten the bolt while pressing it against the rail.

Fig. (1) Block mounting procedure



⚠Caution

- Note 1) When there are 10 or fewer manifold block assemblies, and more are added to make a total of 11 or more, a supply/exhaust block assembly must also be added.
- Note 2) When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate. Before supplying air, confirm that there are no gaps, etc. between blocks, and that manifold blocks are securely fastened to the DIN rail. Then supply air and confirm that there is no air leakage before operating.
- Note 3) One connector assembly is necessary for one solenoid.
When a number is necessary for the connector assembly mark tube, suffix the number to the part no. (0 to 15 are provided as mark tube numbers.)
Ex) +COM spec.: D type for 2 to 8 stations: No. 10
SY3000-43-1A-10

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, etc. For mounting a new fitting assembly, insert it and then insert a clip until it will not come out of the manifold block.

Fitting Assembly Part No.

Metric size

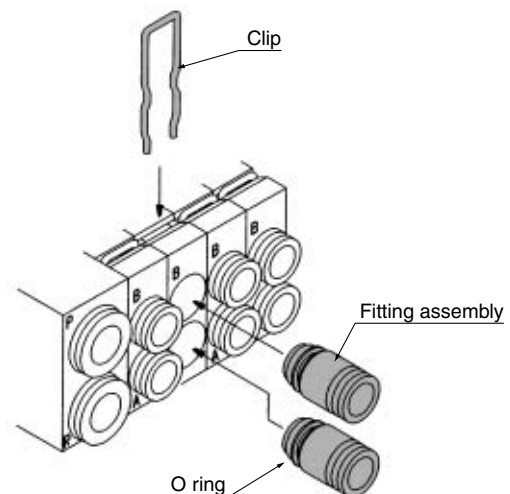
SY3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SY5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8

Inch size

SY3000	One-touch fitting for ø ⁵ / ₃₂ "	VVQ1000-50A-N3
	One-touch fitting for ø ¹ / ₄ "	VVQ1000-50A-N7
SY5000	One-touch fitting for ø ⁵ / ₃₂ "	VVQ1000-51A-N3
	One-touch fitting for ø ¹ / ₄ "	VVQ1000-51A-N7
	One-touch fitting for ø ⁵ / 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.



Series SY3000/5000

Base Mounted Monifold

Stacking Type/DIN Rail Mounted

Plug-in

How to Order Manifold

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

SS5Y 3-45 F D-05 U-C4

Series

3	SY3000
5	SY5000

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	Single wining spec.
:	:	(Applicable up to 20 solenoid valves.)
20	20 stations	



- * This also includes the number of blanking plate assemblies.
- * Two stations are necessary for the double, 3 position (Dual body type).

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 on the manifold specification sheet.

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

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

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

Voltage

Nil	24 VDC
12V	12 VDC

Option

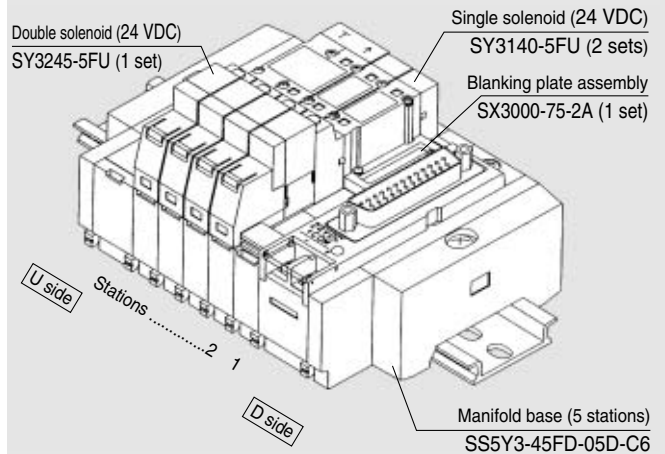
When a longer DIN rail is desired than the specified stations, specify the station number to be required.
(20 stations at maximum)



For external pilot and built-in silencer, refer to page 1-4-197.

How to Order Valve Manifold Assembly

Example (Type 45F/D-sub connector (25 pins))



SS5Y3-45FD-05U-C6

1 set

(Type 45F, D-sub connector 5 port manifold base part no.)

* SX3000-75-2A

1 set (Blanking plate assembly part no.)

* SY3140-5FU

2 sets (Single solenoid part no.)

* SY3245-5FU

1 set (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 connector box.
- When ordering double solenoid valves/3 position (Dual body type), please keep in mind that they require two manifold stations.

How to Order Valves

(Type 45F, 45P□, 45T, 45T1)

2 position single SY 3 1 4 0-5 FU

Double, 3 position SY 3 2 4 5-5 FU

Series

3	SY3000
5	SY5000

Type of actuation

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

Dual body type (Double, 3 position)

Rated voltage

5	24 VDC
6	12 VDC

Manual override

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

How to Order Manifold

Type 45P (Flat ribbon cable)

SS5Y 3-45 P D-05 U-C4

Series

3	SY3000
5	SY5000

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 stations

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

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)

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	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

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

Valve stations (Blanking plate assemblies are included.)

26 pins (P) connector

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 20 solenoid valves.)
:	:	
20	20 stations	

20 pins (PG) connector

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
:	:	
16	16 stations	

10 pins (PH) connector

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 8 solenoid valves)
:	:	
08	8 stations	

* Two stations are necessary for the double, 3 position (Dual body type).

Type 45T (9 pins terminal block)

SS5Y 3-45T D-05 U-C4

Series

3	SY3000
5	SY5000

Terminal block mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 8 solenoid valves)
:	:	
08	8 stations	

* This also includes the number of blanking plate assemblies.

* Two stations are necessary for the double, 3 position (Dual body type).

SUP/EXH block assembly mounting position

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

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
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)

SS5Y 3-45T1 D-15 B-C4

Series

3	SY3000
5	SY5000

Terminal block mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 17 solenoid valves.)
:	:	
17	17 stations	

* This also includes the number of blanking plate assemblies.

* Two stations are necessary for the double, 3 position (Dual body type).

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 stations
M	Special specifications	

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
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) The terminal block (45T) manifold has no common polarity. It can be used for both positive and negative common.

How to Order Manifold

Type 45G (Flat cable, PC wiring system compatible)

SS5Y 3-45G D-05 U C4

Series

3	SY3000
5	SY5000

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
⋮	⋮	
16	16 stations	

* Two stations are necessary for the double, 3 position (Dual body type).
* This also includes the number of blanking plate assemblies.

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

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	SY5000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	SY5000
N3	One-touch fitting for ø5/32"	
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

SUP/EXH block assembly specifications

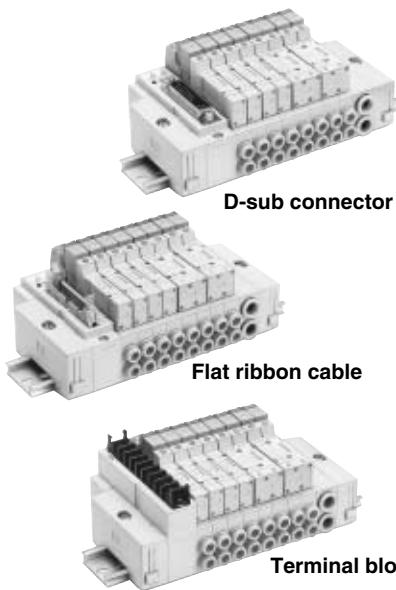
Symbol	Specifications
Nil	Internal pilot
R	External pilot
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer

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 on the manifold specification sheet.

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							
P (SUP)/R (EXH)		Common SUP, Common EXH							
Valve stations <small>Note 1, 2)</small>		2 to 20 stations		2 to 16 stations		2 to 8 stations		2 to 17 stations	2 to 16 stations
A, B port Porting specifications	Location	Base							
	Direction	Side							
Port size	P, R port	SY3000	C8 (One-touch fitting for ø8)						
		SY5000	C10 (One-touch fitting for ø10)						
	A, B port	SY3000	C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)						
		SY5000	C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)/C8 (One-touch fitting for ø8)						
Applicable connector		D-sub connector Complies with MIL-C-24308 JIS-X-5101	Flat ribbon cable connector Socket: 26 pins MIL type with strain relief Conforming to MIL-C-83503	Flat ribbon cable connector Socket: 20 pins MIL type with strain relief Conforming to MIL-C-83503	Flat ribbon cable connector Socket: 10 pins MIL type 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 type 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)	SY3000	2 to 10 stations: W = 26n + 172 11 to 20 stations: W = 26n + 199							
	SY5000	2 to 10 stations: W = 54n + 227 11 to 20 stations: W = 52n + 264							

Note 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.
Note 2) There is a limit depending on the number of solenoids. Refer to "How to Order".

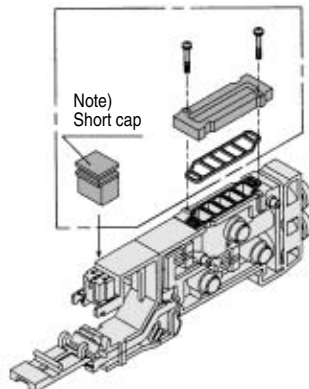
Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	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
SS5Y3-45□	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45□	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

Blanking plate assembly



Series	Assembly part no.
SY3000	SX3000-75-2A
SY5000	SX5000-76-2A

Note) • When mounting blanking plate, be sure to mount a short cap.
• Two stations are necessary for the double, 3 position (Dual body type).

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.
SY3000	SX3000-77-1A
SY5000	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.)

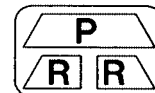
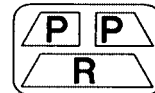


Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

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 with SY3000/5000)

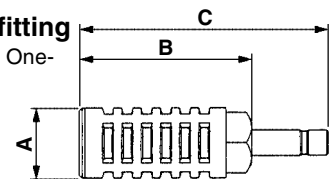
Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



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

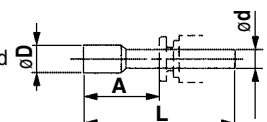
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm²	ø16	26	51
	AN200-KM10	26 mm²	ø22	53.8	80.8
For SY5000 (ø10)	AN300-KM10	30 mm²	ø25	70	97

Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



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
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

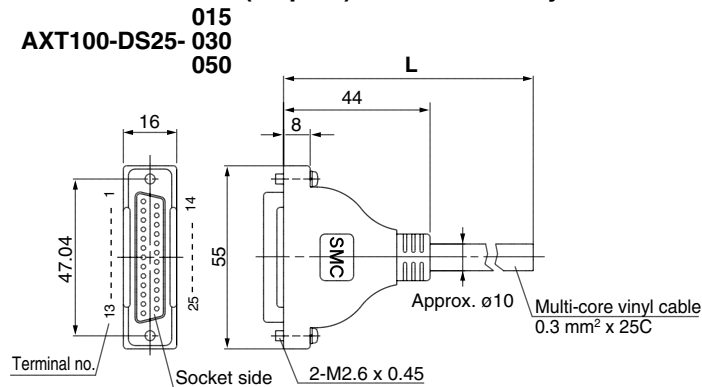
Caution

Mounting screw tightening torques

M2: 0.17 N·m
M3: 0.8 N·m
M4: 1.4 N·m

Manifold Option

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



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

D-sub Connector Cable

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



* When a commercially available connector is required, use a 25 pin female connector conforming to MIL-C24308.

Electric Characteristics

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

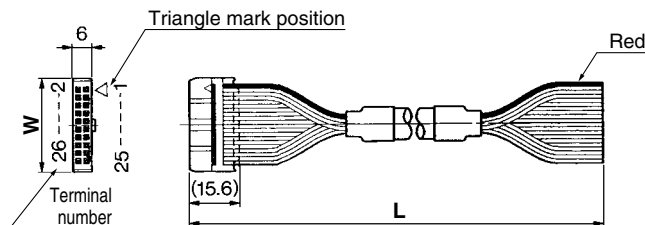
Note) The min. bending radius of D-sub cable assembly is 20 mm.

Connector manufacturers' example

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

■ Flat Ribbon Cable Connector/Cable assembly

AXT100-FC □ -¹₁₀



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

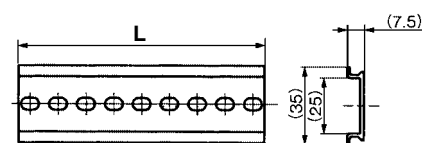
- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ Dimensions/DIN rail

VZ1000-11-1-□

● Refer to L dimensions

* Fill in □ 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					

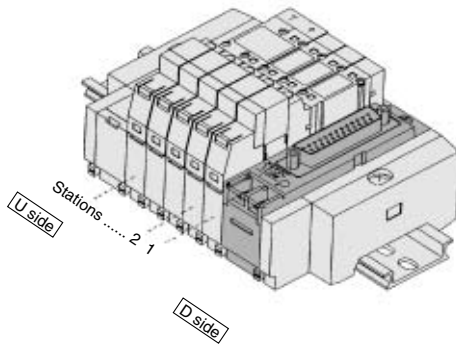


* Refer to L1 dimension on pages starting with page 1-4-150 for lengths that correspond to the number of manifold stations.

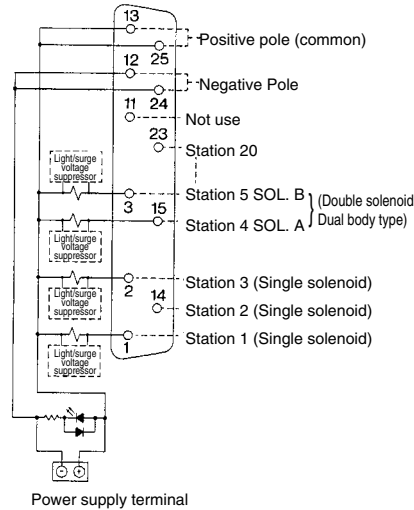
Manifold Internal Wiring

Type 45(N)F: D-sub Connector

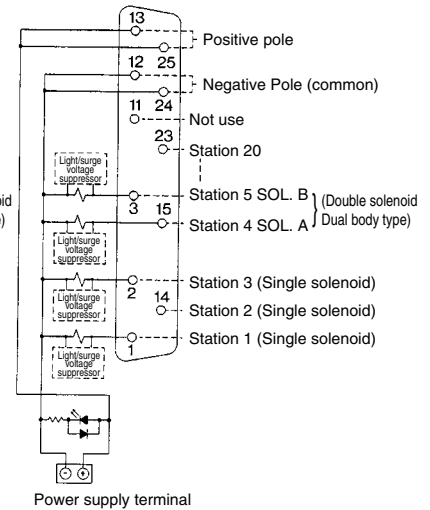
A D-sub connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



<For positive common (45F)>



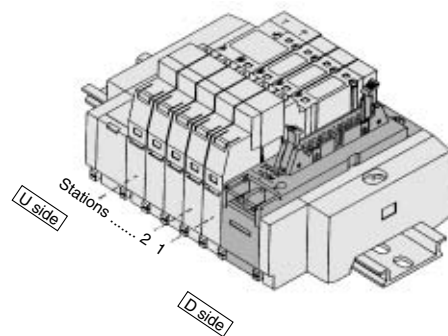
<For negative common (45NF)>



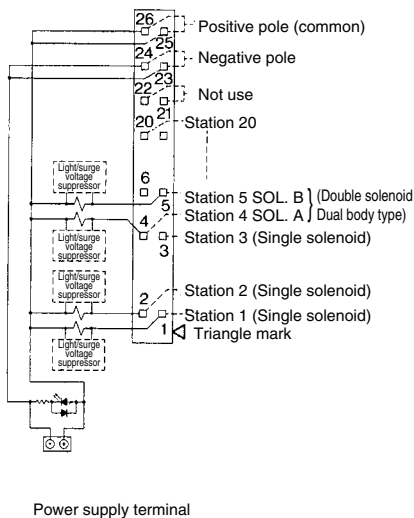
- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 20 manifold stations, with up to 22 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

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

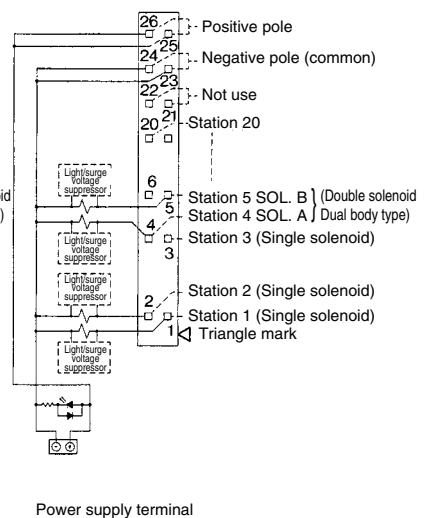
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



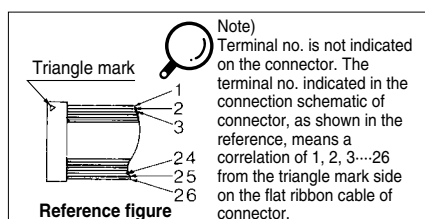
<For positive common (45P)>



<For negative common (45NP)>



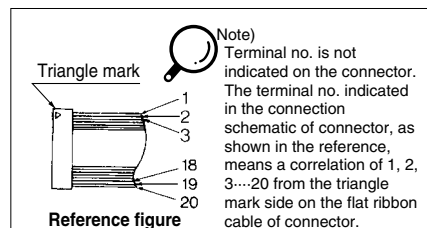
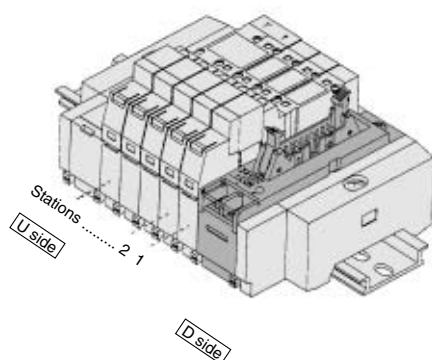
- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 20 manifold stations, with up to 20 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.



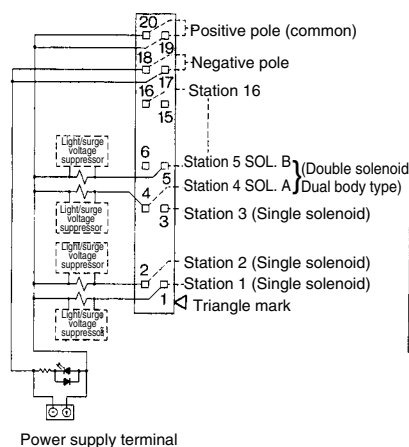
Manifold Internal Wiring

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

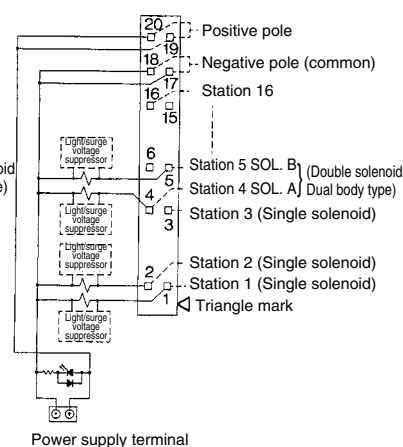
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



<For positive common (45PG)>



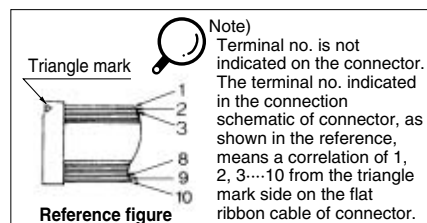
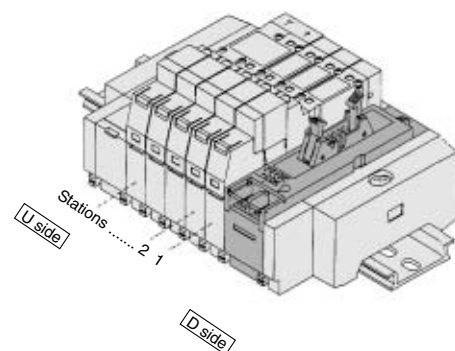
<For negative common (45NPG)>



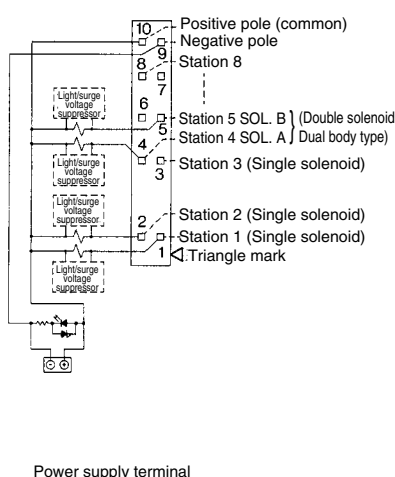
- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 16 manifold stations, with up to 16 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

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

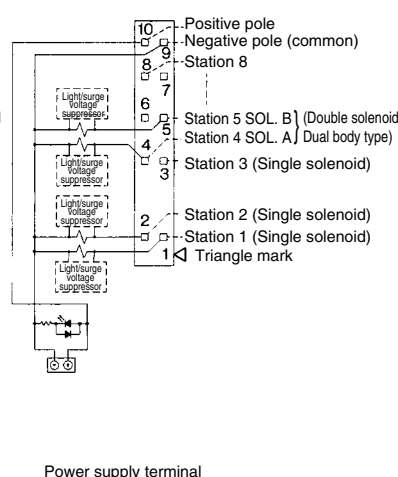
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



<For positive common (45PH)>



<For negative common (45NPH)>

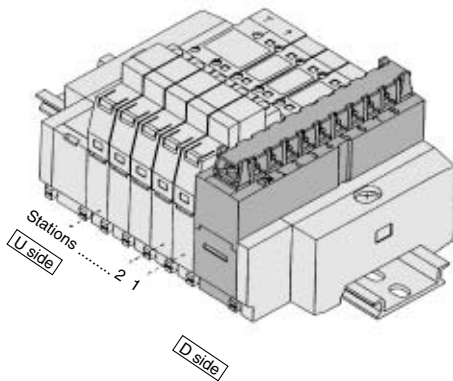


- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 8 manifold stations, with up to 8 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

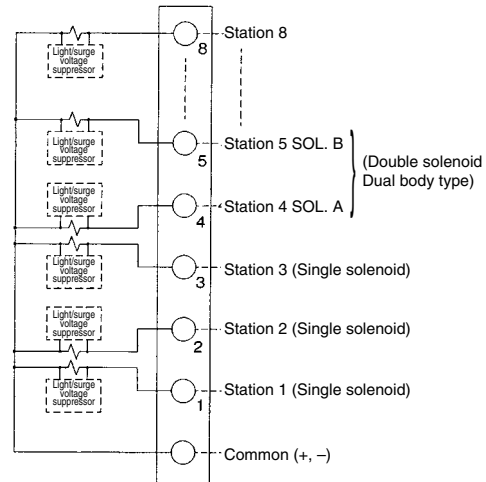
Manifold Internal Wiring

Type 45T: Terminal Block

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



(45T)



SV

SZ

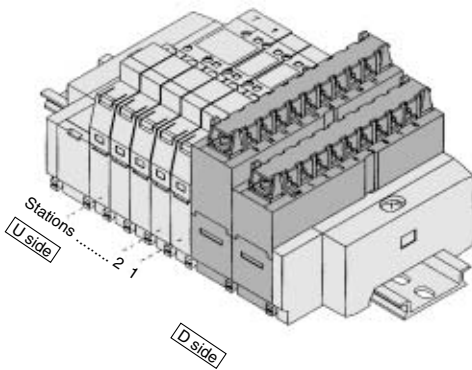
SY

SYJ

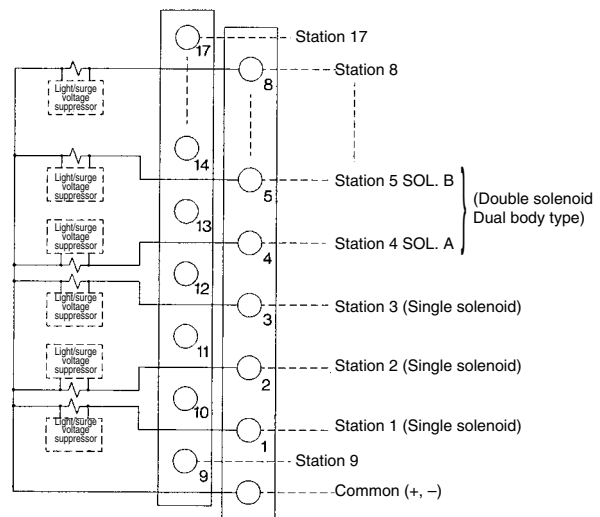
SX

- The maximum number of stations that can be accommodated is 8 manifold stations, with up to 8 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.

Type 45T1: Terminal Block



(45T1)

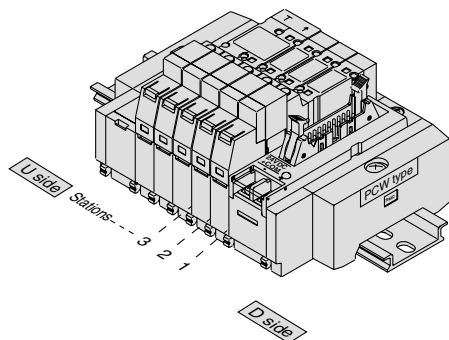


- The maximum number of stations that can be accommodated is 17 manifold stations, with up to 17 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
- There is no polarity in the COM wiring. Supply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

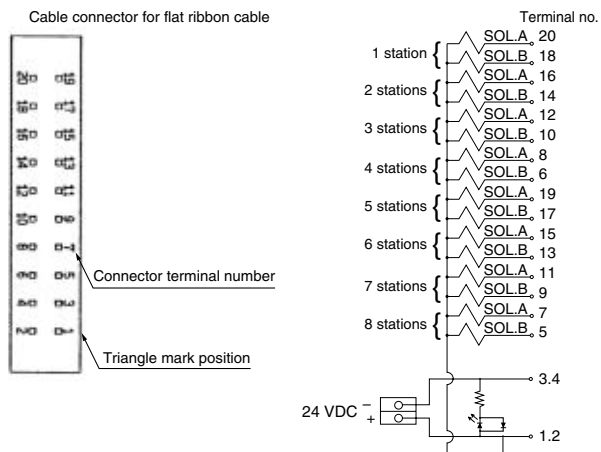
Manifold Internal Wiring

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

It's 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.)



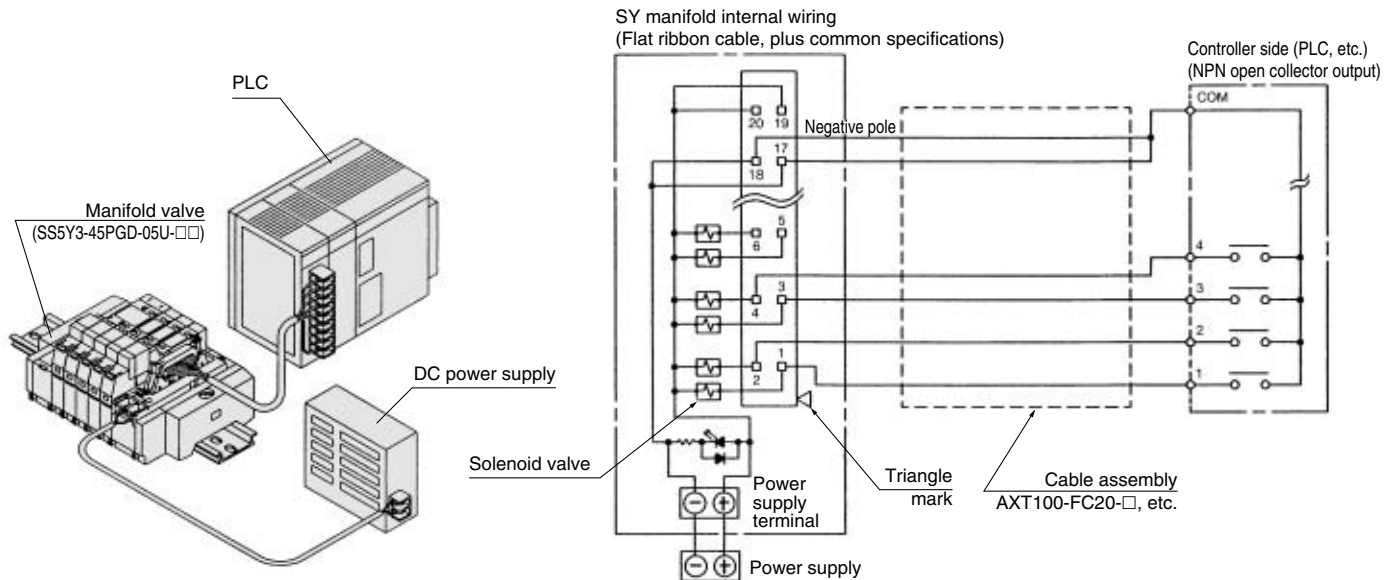
- The maximum number of stations that can be accommodated is 16 manifold stations, with up to 16 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

(For details about the PC wiring system, refer to catalog)
CAT.ES02-20 separately.

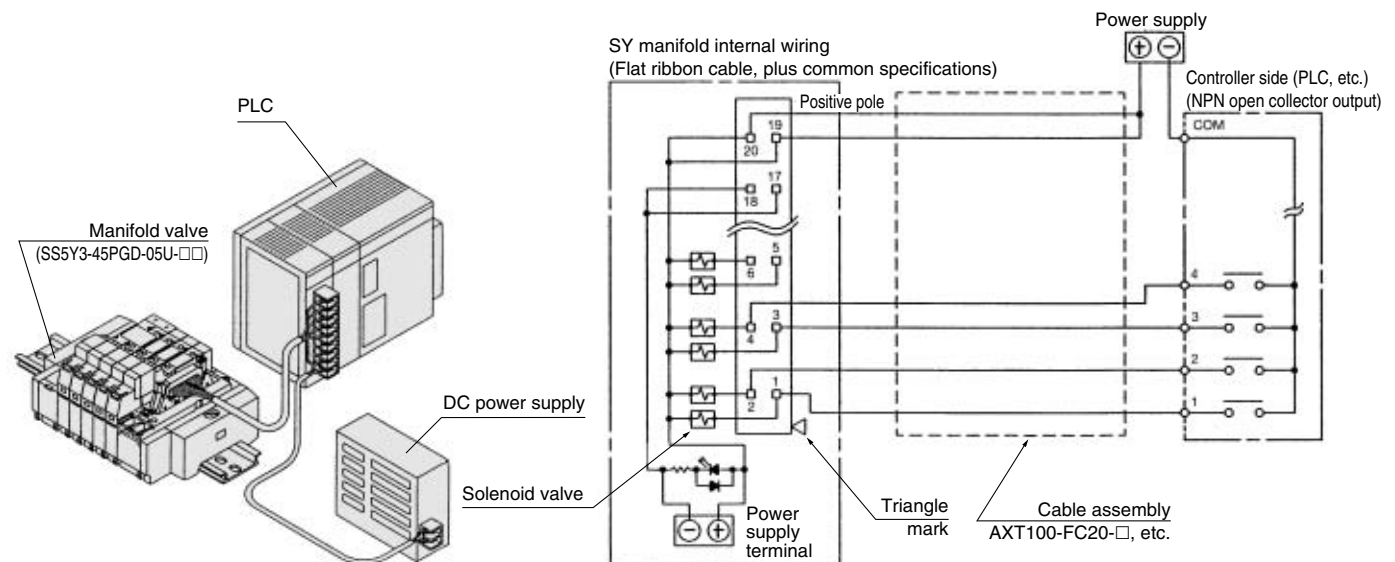
How to Connect SS5Y□-45□ (Plug-in)

Power terminal is equipped with plug-in manifold of Series SY 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 not using manifold power supply terminals (Power is supplied to the controller side or along the wiring, etc.)

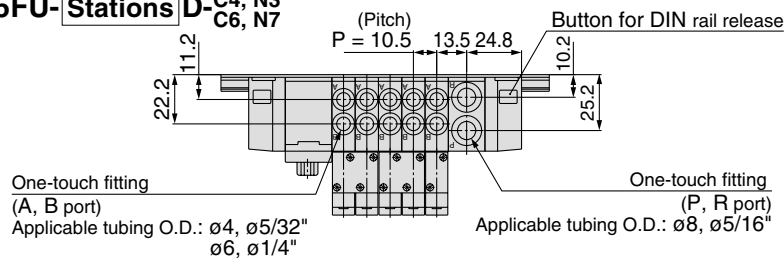


⚠ Caution

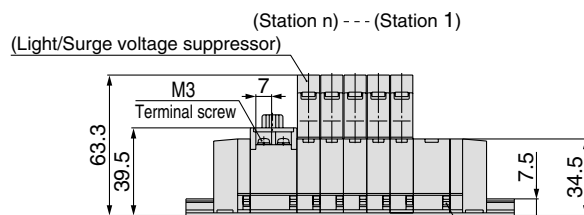
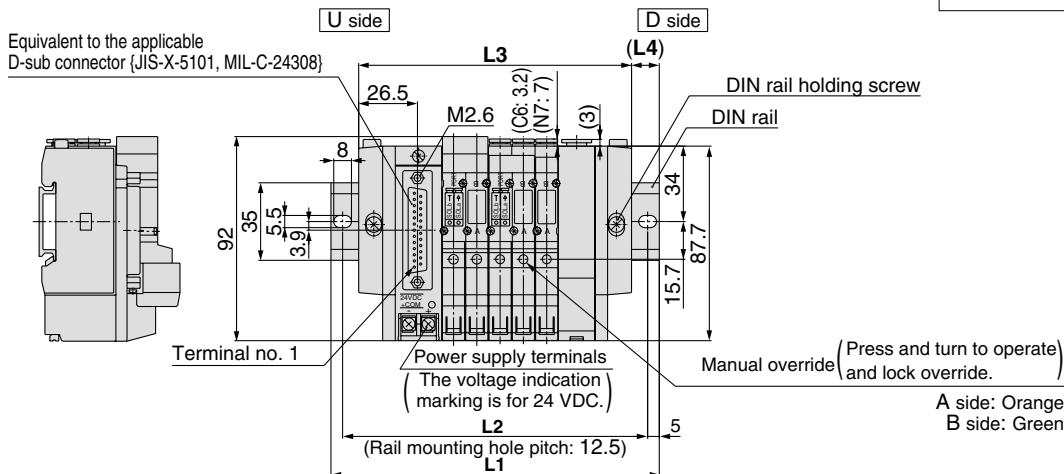
- Single wire, COM position, etc. of PLC are different from each manufacturer. When connecting with PLC, read the specifications carefully and understand the electrical circuit. Poor wiring could cause damage to PLC, power source, etc. as well as manifold and valve.

SY3000: D-sub Connector/Plug-in

**SS5Y3-45FU- Stations D-C4, N3
C6, N7**

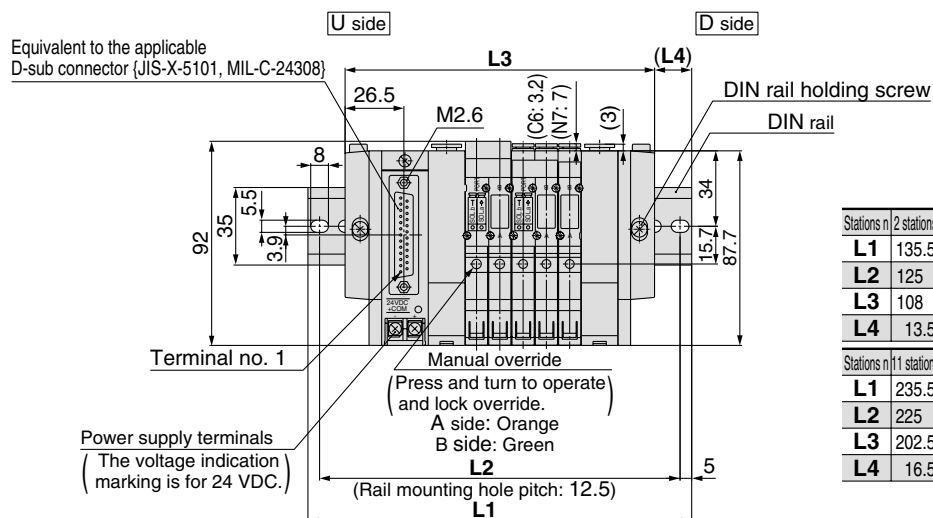
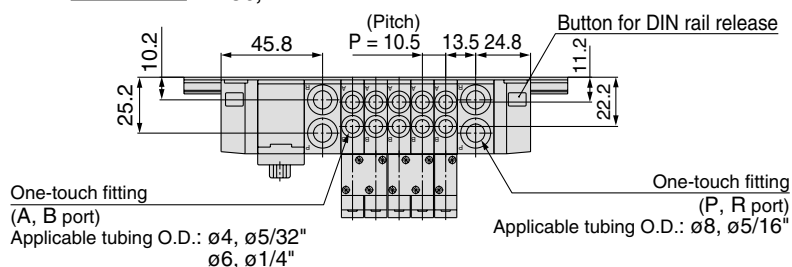


Note) The L1 to L4 dimensions of **SS5Y3-45FU-**
Stations U^{C4, N3}_{C6, N7} are identical to those of
 SS5Y3-45FU-**Stations** D^{C4, N3}_{C6, N7}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

SS5Y3-45FU- Stations **B-** C4, N3
C6, N7

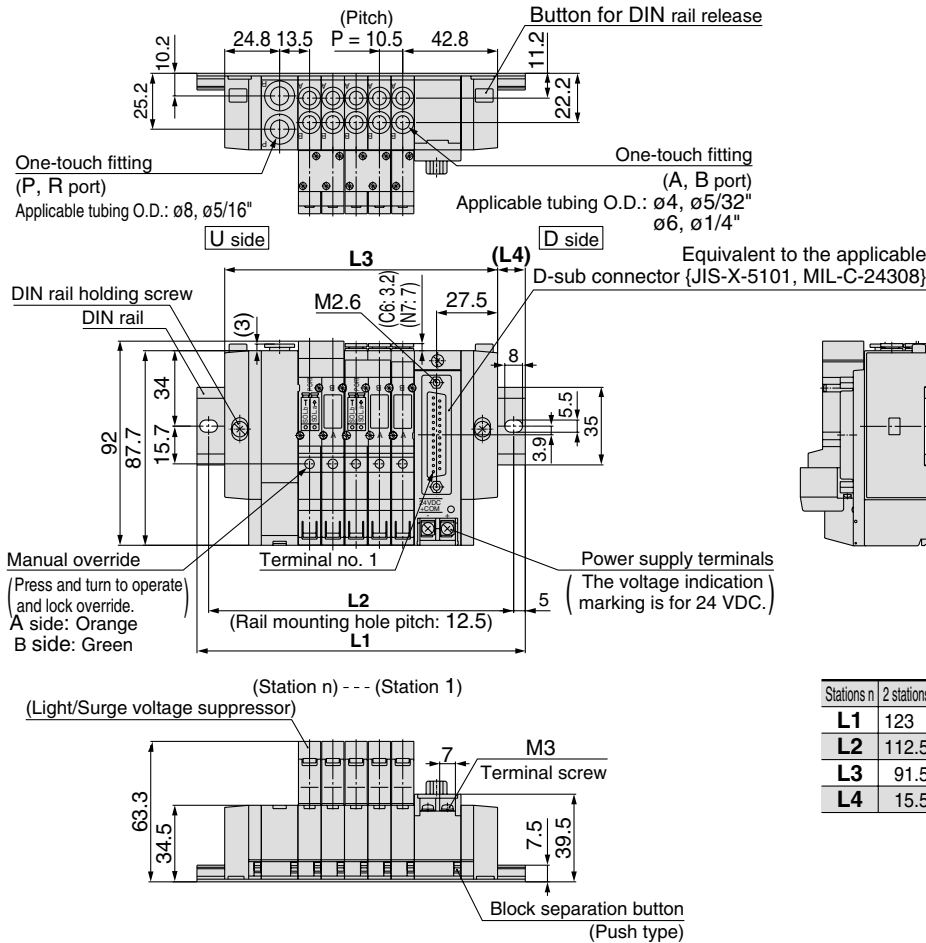


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

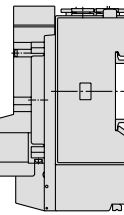
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

SY3000: D-sub Connector/Plug-in

SS5Y3-45FD- Stations U-C4, N3 C6, N7

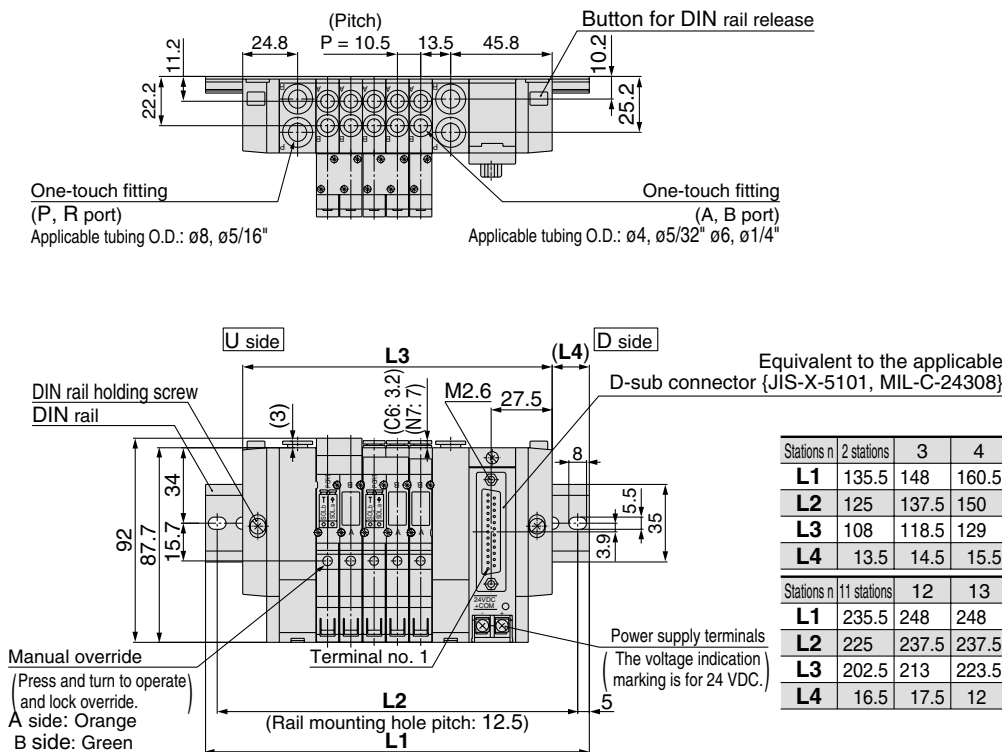


Note) The L1 to L4 dimensions of **SS5Y3-45FD- Stations D-C4, N3 C6, N7** are identical to those of **SS5Y3-45FD- Stations U-C4, N3 C6, N7**.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

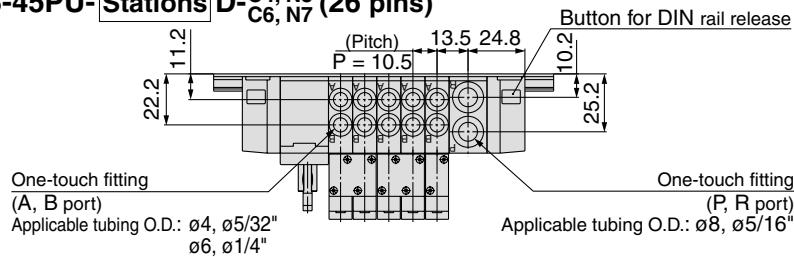
SS5Y3-45FD- Stations B-C4, N3 C6, N7



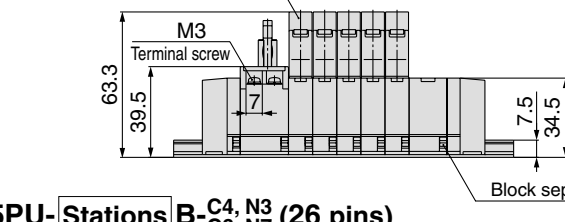
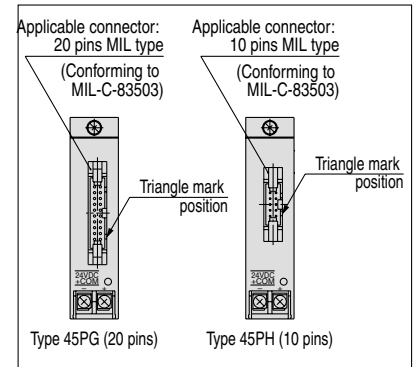
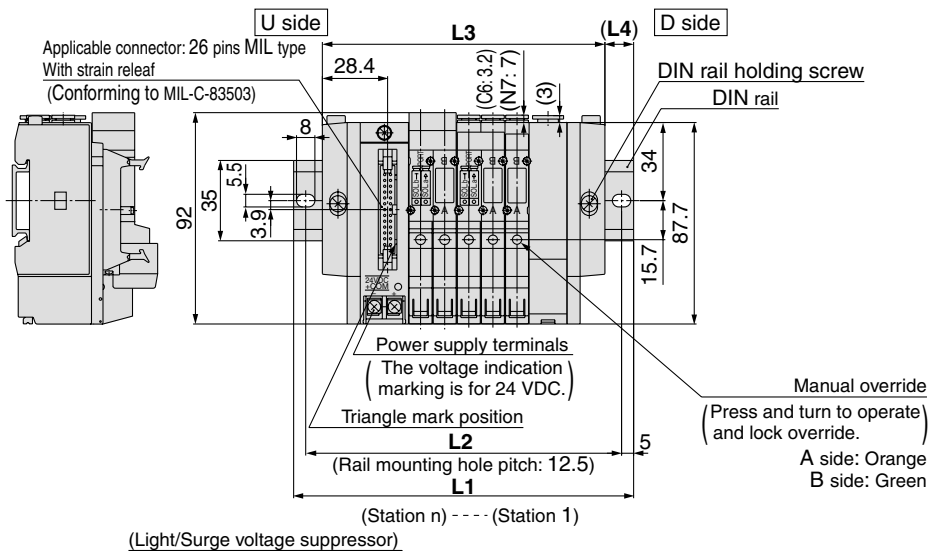
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

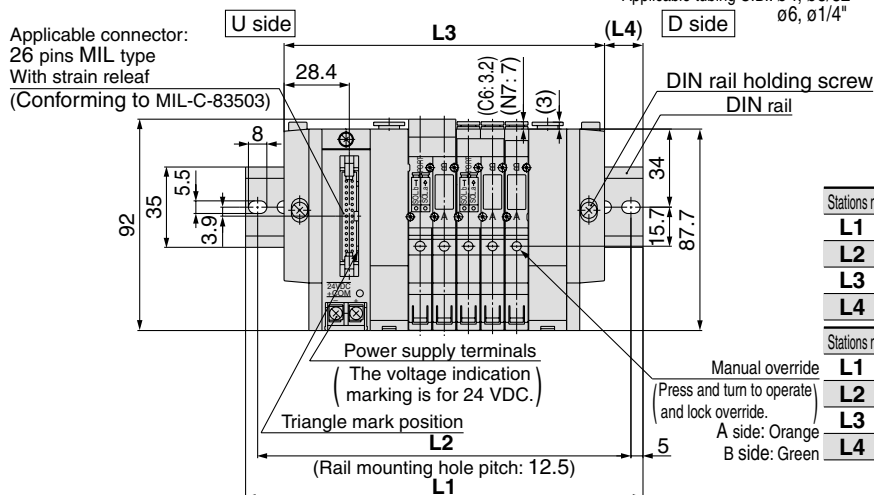
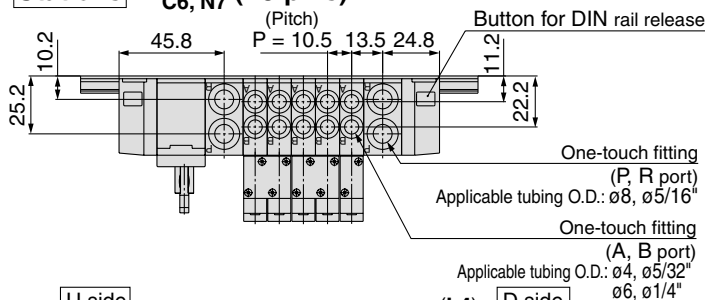
SY3000: Flat Ribbon Cable/Plug-in

SS5Y3-45PU- Stations D-C₄, N₃ (26 pins)

Note) The L1 to L4 dimensions of SS5Y3-45P□U- Stations U-C₄, N₃ are identical to those of SS5Y3-45PIU- Stations D-C₄, N₃.



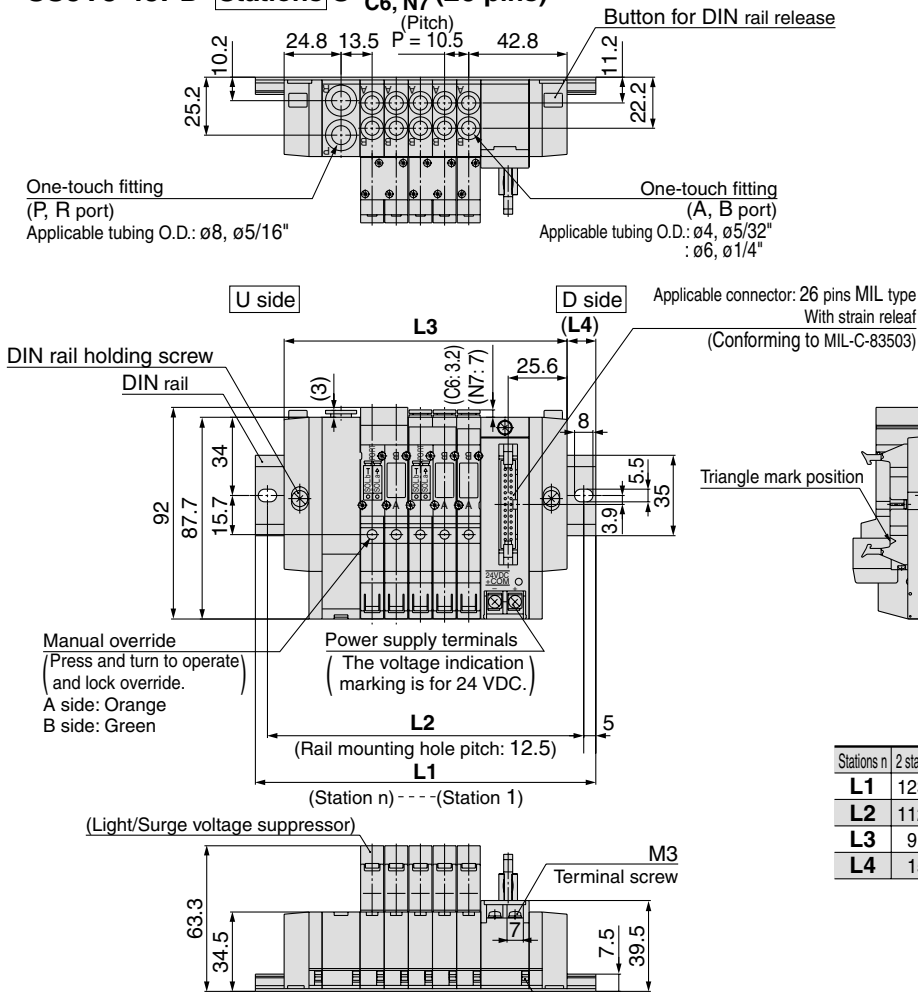
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

SS5Y3-45PU- Stations B-C₄, N₃ (26 pins)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

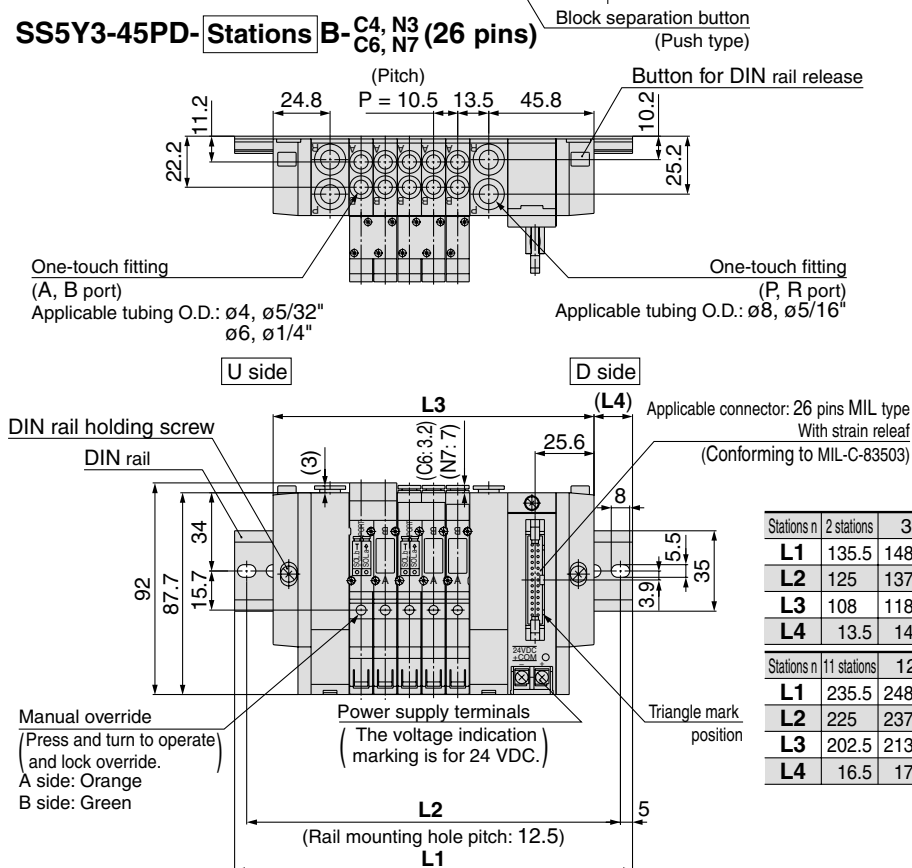
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

SY3000: Flat Ribbon Cable/Plug-in

SS5Y3-45PD- Stations U-^{C4, N3}_{C6, N7} (26 pins)

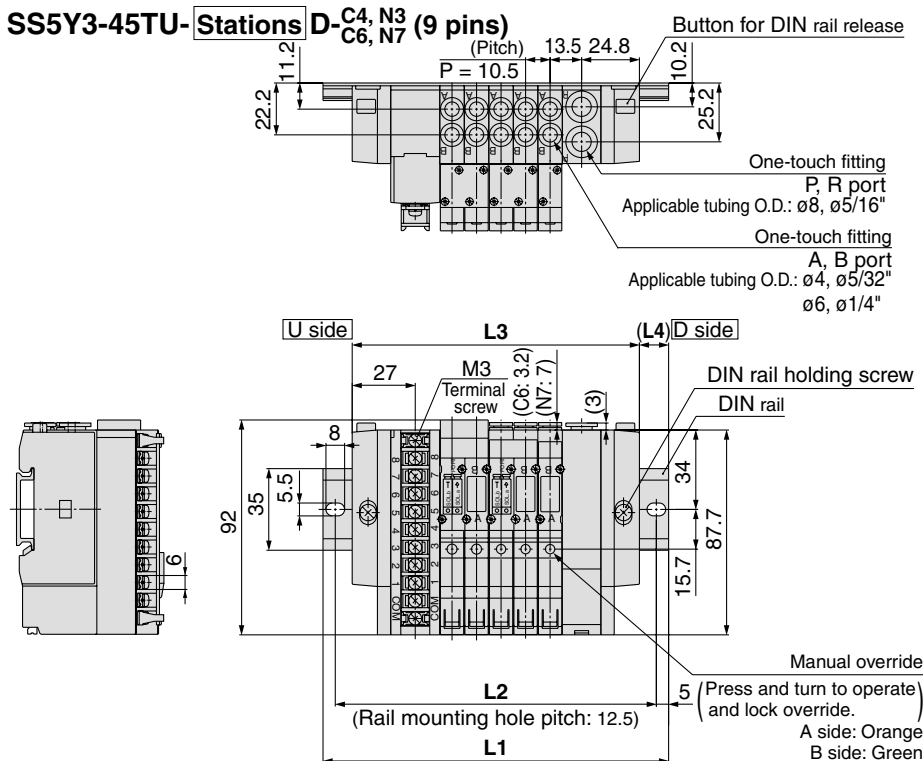
Note) The L1 to L4 dimensions of SS5Y3-45PD- Stations D-^{C4, N3}_{C6, N7} are identical to those of SS5Y3-45PD- Stations U-^{C4, N3}_{C6, N7}.

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

SS5Y3-45PD- Stations B-^{C4, N3}_{C6, N7} (26 pins)

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

SY3000: 9 Pins Terminal Block/Plug-in**SS5Y3-45TU- Stations D-^{C4, N3}_{C6, N7} (9 pins)**

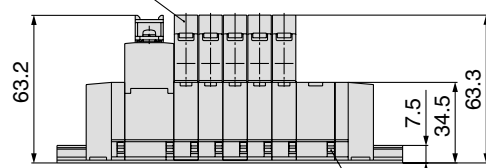
Note) The L1 to L4 dimensions of **SS5Y3-45TU-**

Stations U-^{C4, N3}_{C6, N7}, SS5Y3-45TD- Stations U-^{C4, N3}_{C6, N7},

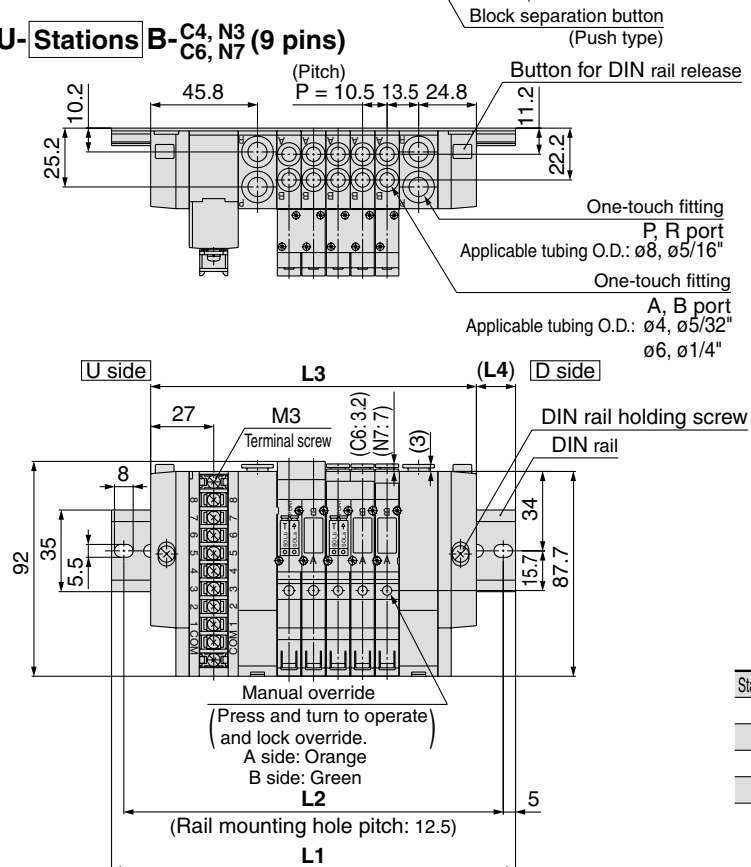
SS5Y3-45TD- Stations D-^{C4, N3}_{C6, N7} are identical

those of SS5Y3-45TU- Stations D-^{C4, N3}_{C6, N7}.

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



Stations n	2 stations	3	4	5	6	7	8 stations
L1	123	135.5	148	148	160.5	173	185.5
L2	112.5	125	137.5	137.5	150	162.5	175
L3	91.5	102	112.5	123	133.5	144	154.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5

**SS5Y3-45TU- Stations B-^{C4, N3}_{C6, N7} (9 pins)**

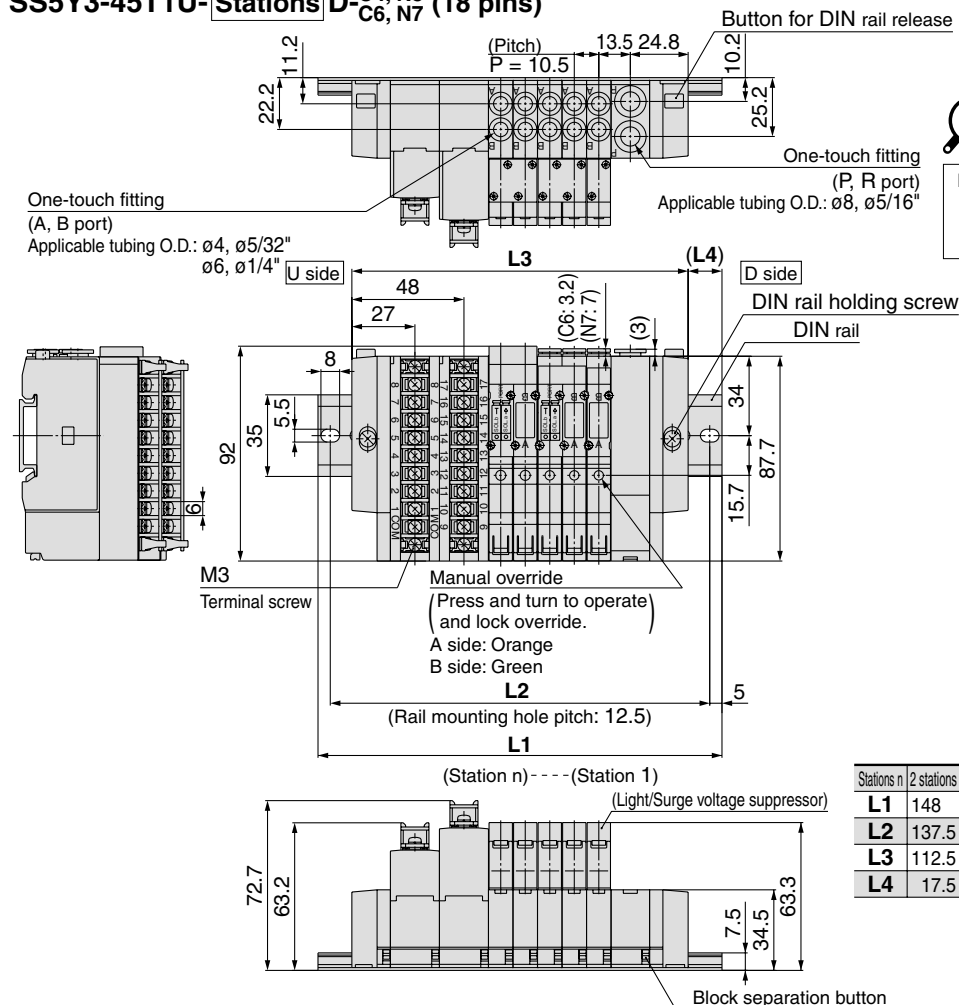
Note) The L1 to L4 dimensions of **SS5Y3-45TD-**

Stations B-^{C4, N3}_{C6, N7} are identical to those of

SS5Y3-45TU- Stations B-^{C4, N3}_{C6, N7}.

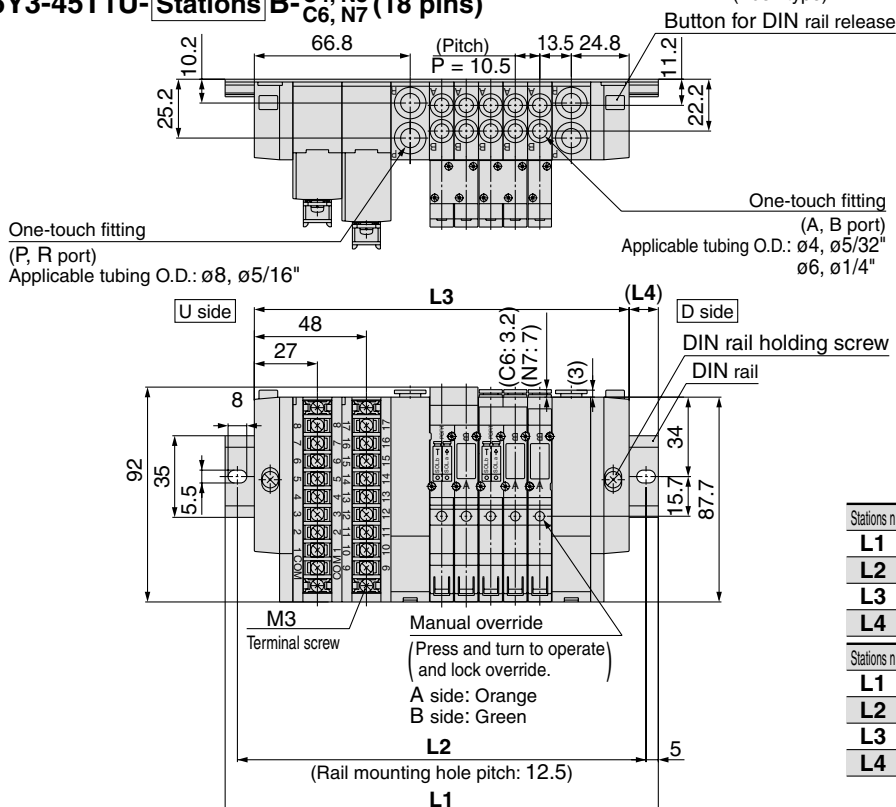
Stations n	2 stations	3	4	5	6	7	8 stations
L1	135.5	148	160.5	173	185.5	185.5	198
L2	125	137.5	150	162.5	175	175	187.5
L3	108	118.5	129	139.5	150	160.5	171
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5

SY3000: 18 Pins Terminal Block/Plug-in

SS5Y3-45T1U- Stations D-^{C4, N3}_{C6, N7} (18 pins)

Note) The L1 to L4 dimensions of SS5Y3-45T1U- Stations U-^{C4, N3}_{C6, N7} are identical to those of SS5Y3-45T1U- Stations D-^{C4, N3}_{C6, N7}.

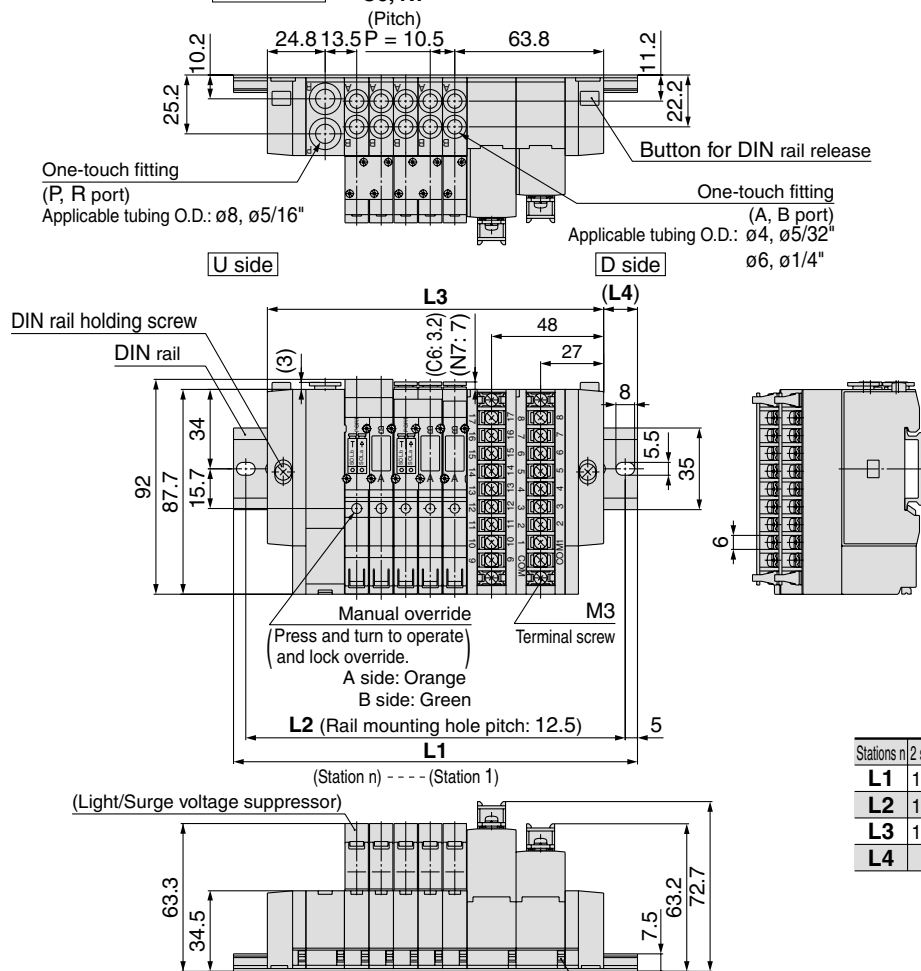
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	148	160.5	173	185.5	198	210.5	210.5	223
L2	137.5	137.5	150	162.5	175	187.5	200	200	212.5
L3	112.5	123	133.5	144	154.5	165	175.5	186	196.5
L4	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13

SS5Y3-45T1U- Stations B-^{C4, N3}_{C6, N7} (18 pins)

Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	160.5	173	185.5	185.5	198	210.5	223	235.5
L2	150	162.5	175	175	187.5	200	212.5	225
L3	129	139.5	150	160.5	171	181.5	192	202.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5

Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	248	248	260.5	273	285.5	298	310.5	310.5
L2	237.5	237.5	250	262.5	275	287.5	300	300
L3	213	223.5	234	244.5	255	265.5	276	286.5
L4	17.5	12	13	14	15	16	17	12

SY3000: 9 Pins Terminal Block/Plug-in

SS5Y3-45T1D- Stations U-^{C4, N3}_{C6, N7} (18 pins)

Note) The L1 to L4 dimensions of SS5Y3-45T1D-

Stations D-^{C4, N3}_{C6, N7} are identical to those of
SS5Y3-45T1D- Stations U-^{C4, N3}_{C6, N7}.

SV

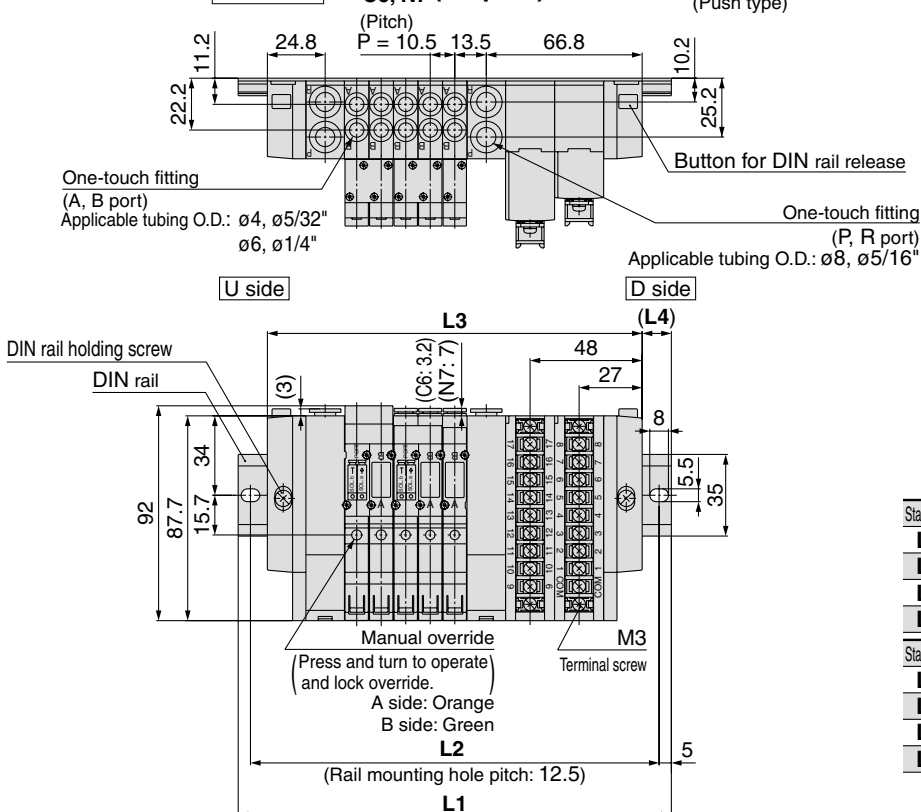
SZ

SY

SYJ

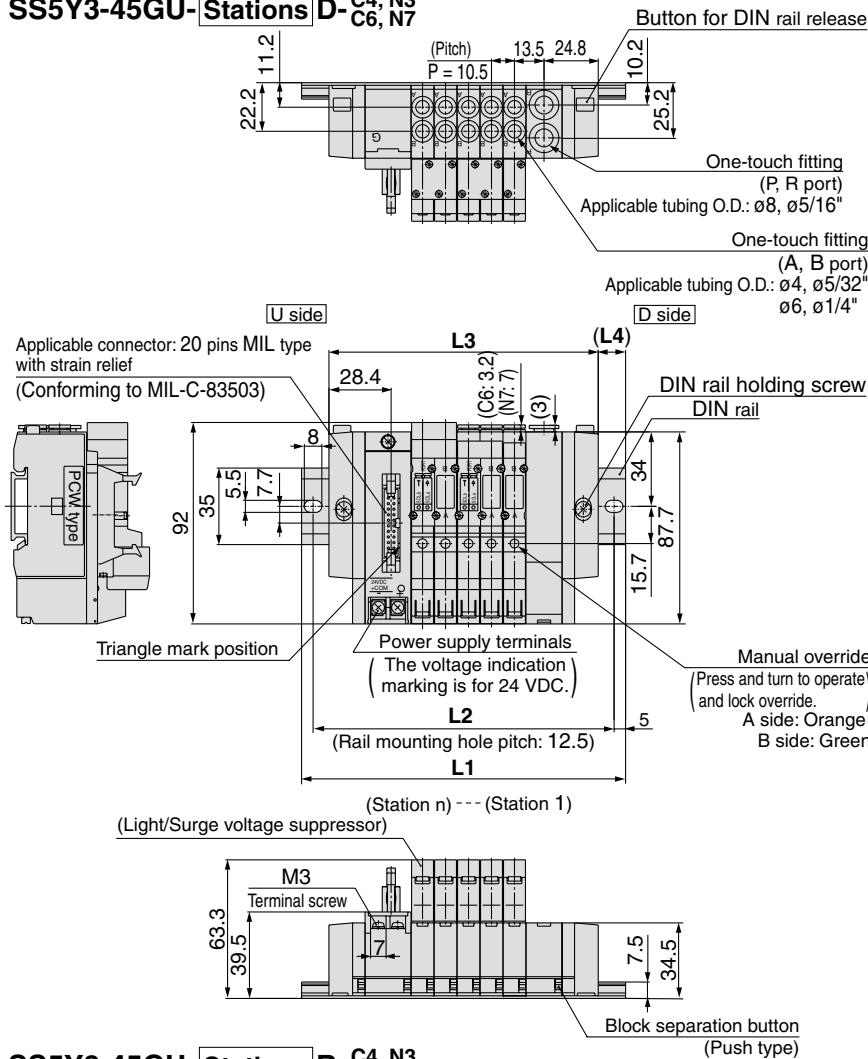
SX

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	148	160.5	173	185.5	198	210.5	210.5	223
L2	137.5	137.5	150	162.5	175	187.5	200	200	212.5
L3	112.5	123	133.5	144	154.5	165	175.5	186	196.5
L4	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13

SS5Y3-45T1D- Stations B-^{C4, N3}_{C6, N7} (18 pins)

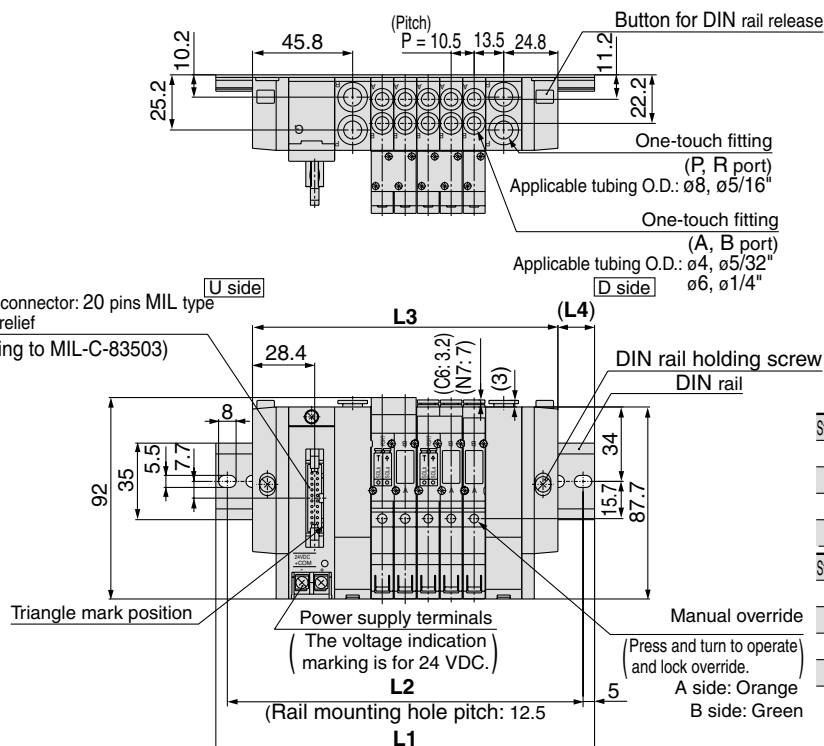
Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	160.5	173	185.5	185.5	198	210.5	223	235.5
L2	150	162.5	175	175	187.5	200	212.5	225
L3	129	139.5	150	160.5	171	181.5	192	202.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5

Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	248	248	260.5	273	285.5	298	310.5	310.5
L2	237.5	237.5	250	262.5	275	287.5	300	300
L3	213	223.5	234	244.5	255	265.5	276	286.5
L4	17.5	12	13	14	15	16	17	12

SY3000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)**SS5Y3-45GU- Stations D- C₄, N₃
C₆, N₇**

Note) The L1 to L4 dimensions of **SS5Y3-45GU- Stations U- C₄, N₃, C₆, N₇** are identical to those of **SS5Y3-45GU- Stations D- C₄, N₃, C₆, N₇**.

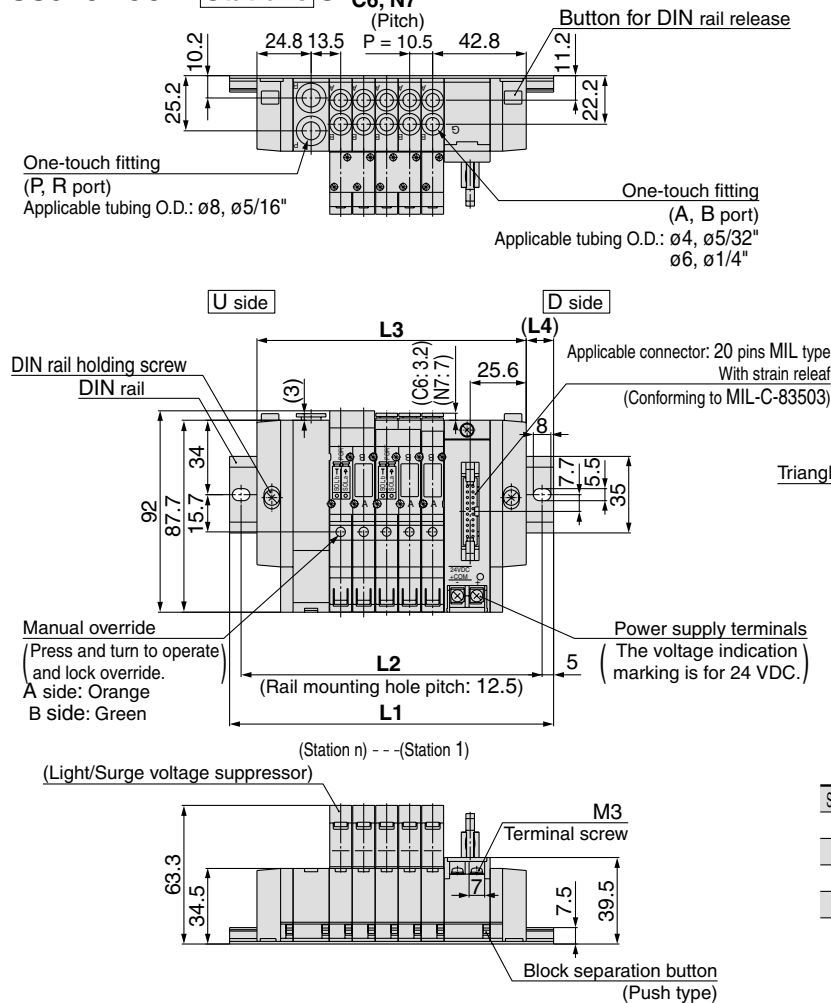
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

**SS5Y3-45GU- Stations B- C₄, N₃
C₆, N₇**

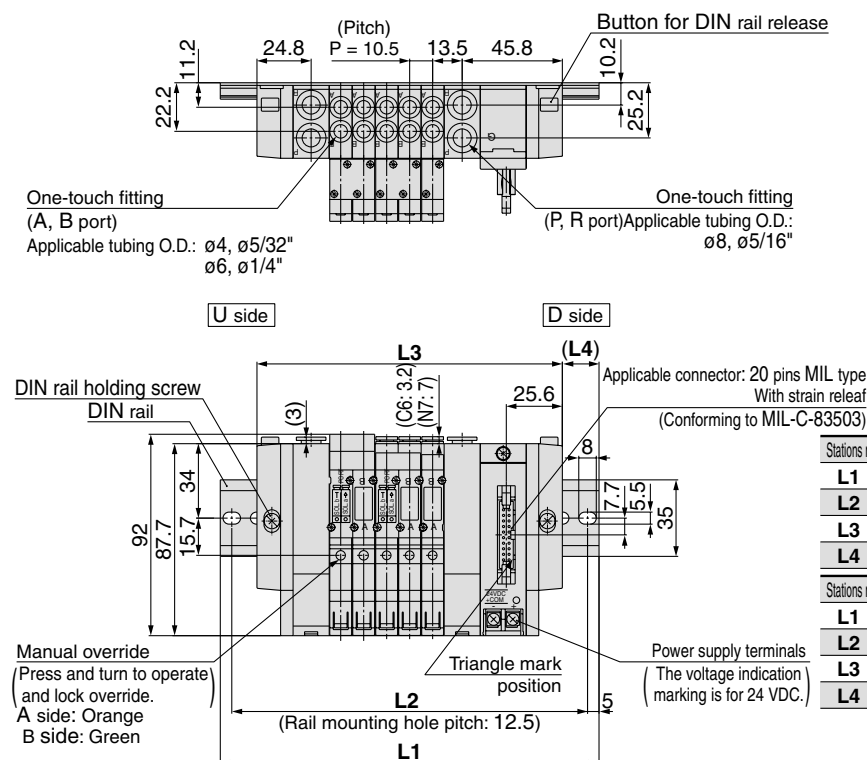
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16 stations
L1	235.5	248	248	260.5	273	285.5
L2	225	237.5	237.5	250	262.5	275
L3	202.5	213	223.5	234	244.5	255
L4	16.5	17.5	12	13	14	15

SY3000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

SS5Y3-45GD- Stations U- C₄, N₃
C₆, N₇

Note) The L1 to L4 dimensions of SS5Y3-45GD- Stations D- C₄, N₃ C₆, N₇ are identical to those of SS5Y3-45GD- Stations U- C₄, N₃ C₆, N₇.

SS5Y3-45GD- Stations B- C₄, N₃
C₆, N₇

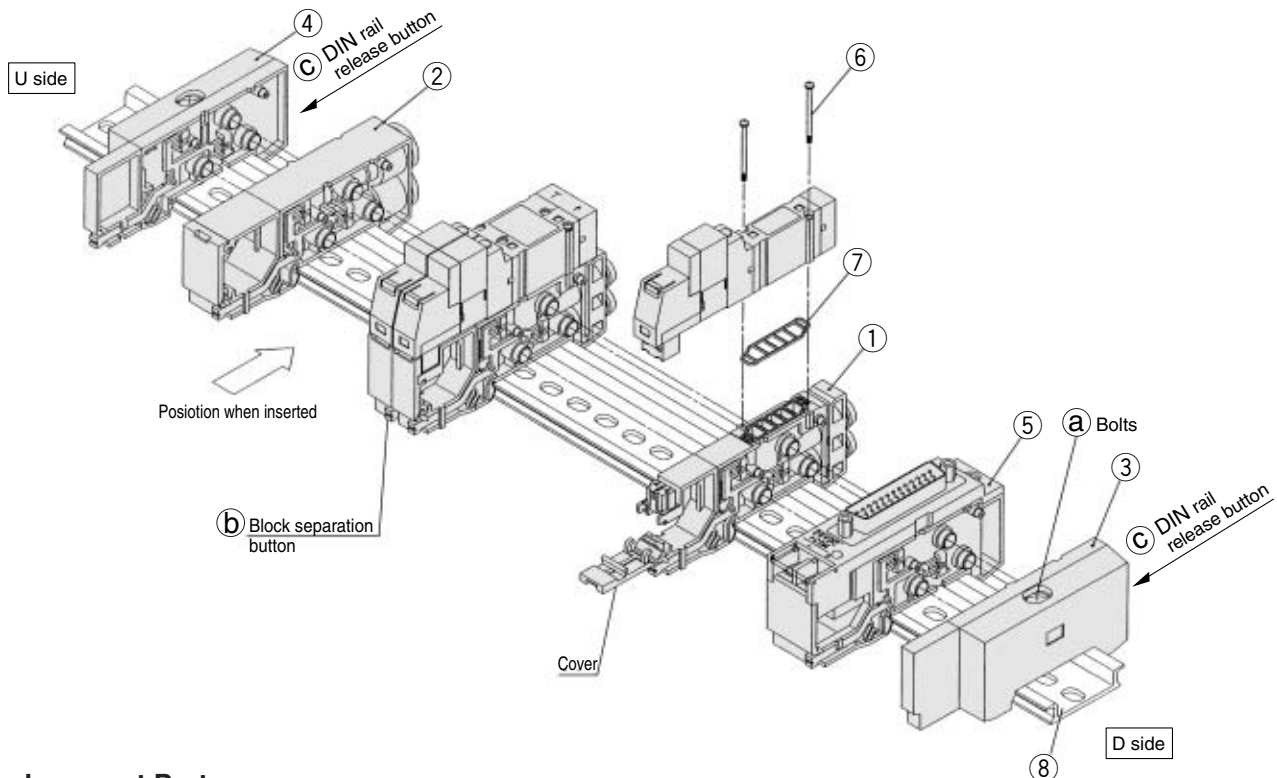
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16 stations
L1	235.5	248	248	260.5	273	285.5
L2	225	237.5	237.5	250	262.5	275
L3	202.5	213	223.5	234	244.5	255
L4	16.5	17.5	12	13	14	15

DIN Rail Manifold Exploded View

Type 45F (D-sub Connector) Manifold



Replacement Parts

No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly	Manifold block assembly part number differs according to an attached lead wire assembly based on the connector spec. Select an appropriate part number from the table of manifold block assembly part number shown below. (Gasket 7 is supplied as an accessory.)		
②	SUP/EXH block assembly	(Metric size) SX3000-51-2A (Inch size) SX3000-51-16A	(Metric size) SX3000-51-2A (Inch size) SX5000-51-16A	Metric size SY3000: P, R port with One-touch fitting for $\phi 8$ SY5000: P, R port with One-touch fitting for $\phi 10$ Inch size With One-touch fitting for $\phi 5/16"$ With One-touch fitting for $\phi 3/8"$
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
⑤-2	Connector block assembly (for 26 pins flat cable)	SX3000-64-2A 2NA-26	SX5000-64-2A 2NA-26	Note) For 24 VDC
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	SY3000-23-4	M3 x 26, Matt nickel plated	
⑦	Gasket	SX3000-57-4	SX5000-57-6	
⑧	DIN rail	VZ1000-11-1-I		Refer to page 1-4-123.

Note 1) The numbers 5-1 to 4 are for 24 VDC. For 12 VDC, suffix "-12V" to the end of parts number. (Example) SX3000-64-1A-12 V

Note 2) Two manifold block assemblies are necessary for the double, 3 position (Dual body type).

Style of manifold	Manifold block assembly part no.	Note
For 45(N)F (D-sub connector)	SX ³ 000-50-3A-□□	□□: AB port SY3000 (metric size) C4: With One-touch fitting for $\phi 4$ C6: With One-touch fitting for $\phi 6$ (inch size) N3: With One-touch fitting for $\phi 5/32"$ N7: With One-touch fitting for $\phi 1/4"$
For 45(N) _{PC} (Flat ribbon cable)	SX ³ 000-50-5A-□□	A, B port SY5000 (metric size) C4: With One-touch fitting for $\phi 4$ C6: With One-touch fitting for $\phi 6$ C8: With One-touch fitting for $\phi 8$ (inch size) N3: With One-touch fitting for $\phi 5/32"$ N7: With One-touch fitting for $\phi 1/4"$ N9: With One-touch fitting for $\phi 5/16"$
For 45G PC Wiring System compatible		
For 45 _{T1} (Terminal block)	SX ³ 000-50-7A-□□	

How to Increase Manifold Base

- 1 Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons (c), at two locations, 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 (black) 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). Δ (Tightening torque: 1.4 N·m)

Fig. (1)

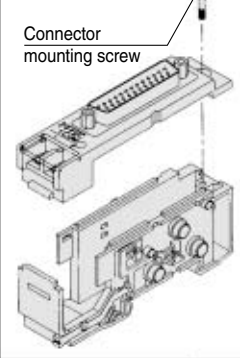


Fig. (2)

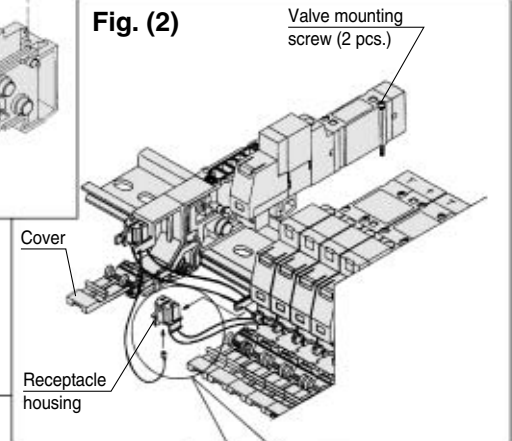


Fig. (3)

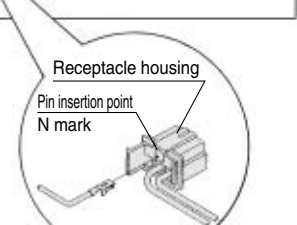
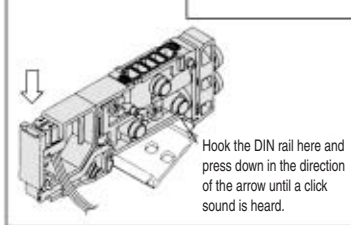
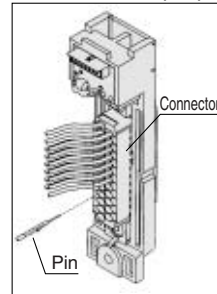


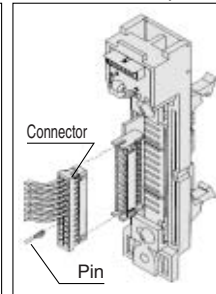
Fig. (4)

D-sub connector (45F)



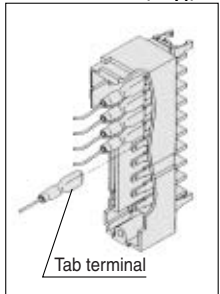
Note)
After inserting pins, lightly pull lead wire to check that pins are locked.

Flat ribbon cable (45P)



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

Terminal block (45T₁)



Note)
Insert tab terminals completely.

Caution

1. Depending on the connector, there is a limit to the number of solenoids that can be used. Manifold bases that can be added cannot exceed the number of usable solenoids.
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.

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, etc. For mounting a new fitting assembly, insert it and then insert a clip until it will not come out of the manifold block.

Fitting Assembly Part No.

Metric size

SY3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SY5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8

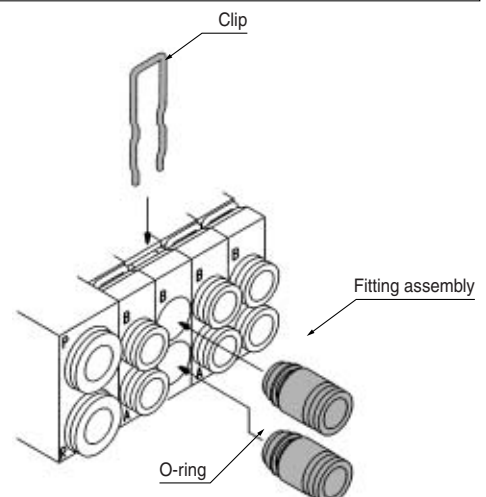
Inch size

SY3000	One-touch fitting for $\varnothing 5/32''$	VVQ1000-50A-N3
	One-touch fitting for $\varnothing 1/4''$	VVQ1000-50A-N7
SY5000	One-touch fitting for $\varnothing 5/32''$	VVQ1000-51A-N3
	One-touch fitting for $\varnothing 1/4''$	VVQ1000-51A-N7
	One-touch fitting for $\varnothing 5/16''$	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.



Series SY3000/5000

Base Mounted Monifold

Stacking Type/DIN Rail Mounted

Serial Transmission (Integrated)

How to Order Manifold

SS5Y **3** - 45S **A** - 05 **U** - C6 -

Series

3	SY3000
5	SY5000

Model

Symbol	Specifications
0	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	Single wiring spec. (Applicable up to 16 solenoid valves.)
:	:	
16	16 stations	

* This also includes the number of blanking plate assemblies.
* Two stations are necessary for the double, 3 position (Dual body type).

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 on the manifold specification sheet.

SI Unit Part No.

Symbol	Specifications	For SS5Y□-45S	Symbol	Specifications:	For SS5Y□-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-ST1	K	Fuji Electric Co.: T-LINK Mini System	EX122-SFU1
D	SHARP Corp.: Satellite I/O Link System	EX122-SSH1	Q	Device Net: CompoBus/D (OMRON Corp.)	EX122-SDN1
E	Matsushita Electric Works: MEWNET-F System	EX122-SPA1	R1	OMRON Corp.: CompoBus/S (16 output points)	EX122-SCS1
F1	NKE Corp.: Uni-wire System (16 output points)	EX122-SUW1	R2	OMRON Corp.: CompoBus/S (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

Option

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

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

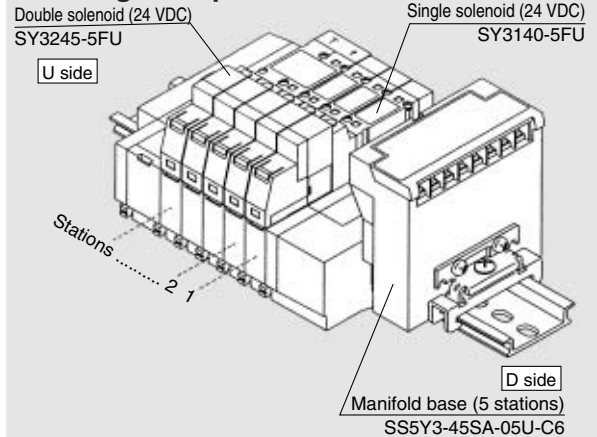
One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example



SS5Y3-45SA-05U-C6 1 set (Type 45S with serial unit 5 stations manifold base part no.)
* SY3140-5FU 3 sets (Single solenoid part no.)
* SY3245-5FU 1 set (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.
* When ordering double solenoid valves/3 position (Dual body type), please keep in mind that they require two manifold stations.
* Serial unit is available only for the D-side mounting type.

How to Order Valves

2 position single SY **3** **1** **4** **0** - **5** **FU**

Double 3 position SY **3** **2** **4** **5** - **5** **FU**

Series

3	SY3000
5	SY5000

Type of actuation

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

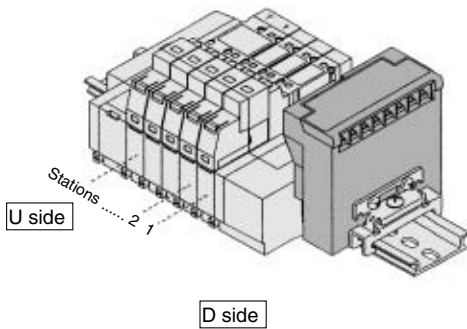
Rated voltage
5 24 VDC

Dual body type (Double, 3 position)

Manual override

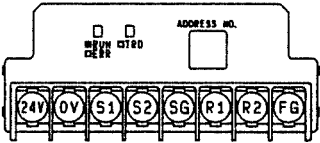
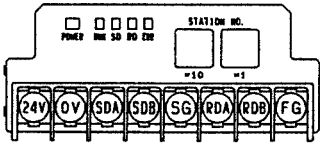
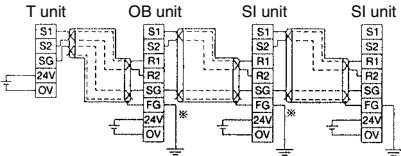
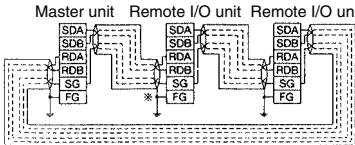
Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

- The serial transmission system reduces wiring work, while minimizing wiring and saving space.
- 16 stations max. (Specify a model with more than 8 stations by using a manifold specification sheet.)

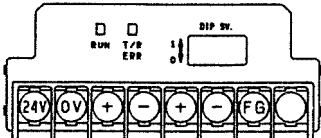
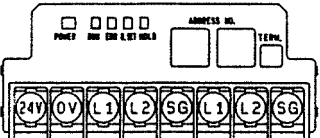
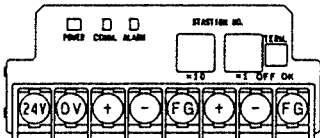
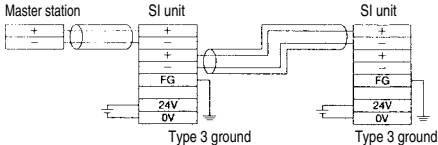
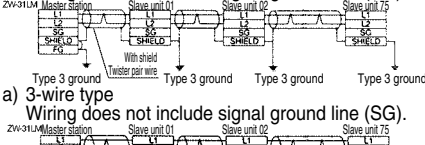
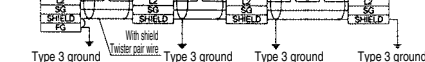
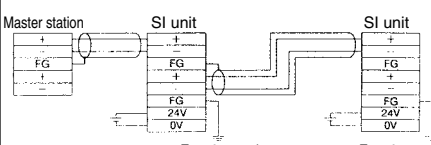


- The total number of stations is tabulated starting from station one on the D side.
- Maximum station: Up to 16 solenoids (16 single solenoids).

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

Name of terminal block, LED	Type SA Applicable to Series EX300	Type SB Mitsubishi Electric Corporation MELSECNET/mini-S3 Data Link System																	
	 <table><thead><tr><th>LED</th><th>Description</th></tr></thead><tbody><tr><td>TRD</td><td>Lights up when receiving data.</td></tr><tr><td>RUN/ERR</td><td>Flashes when received data is normal; lights up when abnormal.</td></tr></tbody></table>	LED	Description	TRD	Lights up when receiving data.	RUN/ERR	Flashes when received data is normal; lights up when abnormal.	 <table><thead><tr><th>LED</th><th>Description</th></tr></thead><tbody><tr><td>POWER</td><td>Lights up when power supply is ON.</td></tr><tr><td>RUN</td><td>Lights up when the data transmission with the master station is normal.</td></tr><tr><td>RD</td><td>Lights up when receiving data.</td></tr><tr><td>SD</td><td>Lights up when sending data.</td></tr><tr><td>ERR.</td><td>Lights up when data reception error occurs; goes off when the error is corrected.</td></tr></tbody></table>	LED	Description	POWER	Lights up when power supply is ON.	RUN	Lights up when the data transmission with the master station is normal.	RD	Lights up when receiving data.	SD	Lights up when sending data.	ERR.
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Note	<ul style="list-style-type: none">• Connection to T unit PLC manufacturer's I/O card enables serial transmission. EX300-TMB1 For models of Mitsubishi Electric Corporation EX300-TTA1 For models of OMRON Corporation EX300-TFU1 For models of Fuji Electric Co., Ltd. EX300-T001 For general models * Up to 32 points per unit.• No. of output points: 16 points	<ul style="list-style-type: none">• MELSECNET/mini-S3 Data Link System Master unit: AJ71PT32-S3 AJ71T32-S3 A1SJ71PT32-S3 * No. of output points: 16 points, No. of sta. occupied: 2 stations																	
Cable wiring	 <p>* Ground either the reception side or the transmission side of the shielding wire shield.</p>	 <p>* Ground either the reception side or the transmission side of the shielding wire shield.</p>																	

SV
SZ
SY
SYJ
SX

	Type SC OMRON Corporation SYSBUS Wiring System	Type SD SHARP Corporation Satellite I/O Link System	Type SE Matsushita Electric Works, Ltd. MEWNET-F System																								
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Note	<ul style="list-style-type: none">• SYSBUS Wire System Master unit: Type C500-RM201 Type C200H-RM201• No. of output points: 16 points	<ul style="list-style-type: none">• Satellite I/O Link System Master unit: ZW-31LM JW-31LM JW-23LM• No. of output points: 16 points	<ul style="list-style-type: none">• MEWNET-F System Master unit: AFP3740 AFP5740• No. of output points: 16 points																								
Cable wiring	<div></div> <p>Type 3 ground</p>	<div><p>a) 2-wire type Wiring does not include signal ground line (SG).</p><p>Type 3 ground</p><p>a) 3-wire type Wiring does not include signal ground line (SG).</p><p>Type 3 ground</p></div>	<div></div> <p>Type 3 ground</p>																								

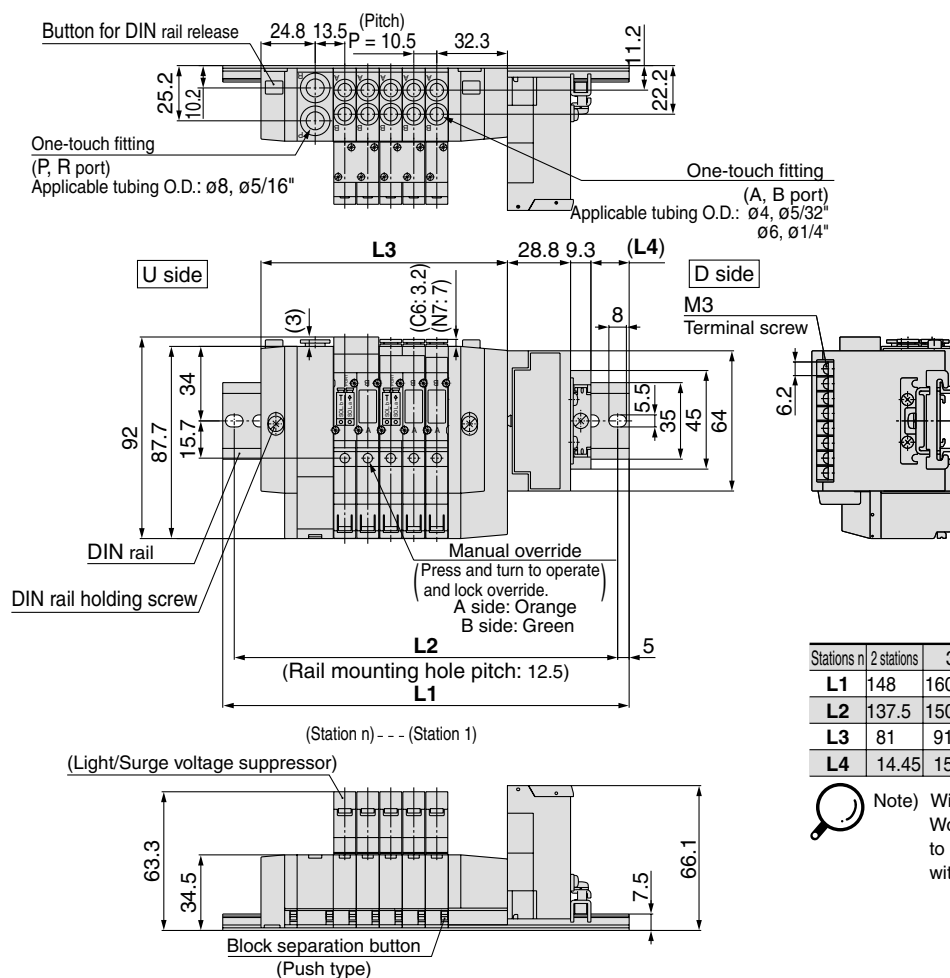
	<div>Type SF1 NKE Corporation Uni-wire System</div>	<div>Type SG Rockwell Automation, Inc. Allen Bradley Remote I/O (RIO) System</div>	<div>Type SJ1, SJ2 SUNX Corporation S-LINK System</div>																				
Name of terminal block, LED	<div></div> <div><table><tr><th>LED</th><th>Description</th></tr><tr><td>POWER</td><td>Lights up when power supply is ON.</td></tr><tr><td>SEND</td><td>Transmission indicator: Flashes when normal; goes out or lights up when abnormal.</td></tr></table></div>	LED	Description	POWER	Lights up when power supply is ON.	SEND	Transmission indicator: Flashes when normal; goes out or lights up when abnormal.	<div></div> <div><table><tr><th>LED</th><th>Description</th></tr><tr><td>POWER</td><td>Lights up when power supply is ON.</td></tr><tr><td>COM.</td><td>Lights up when communication is normal. Flashes when communication is initialized. Goes out for abnormal communication.</td></tr><tr><td>ERROR</td><td>Lights up for abnormal communication.</td></tr></table></div>	LED	Description	POWER	Lights up when power supply is ON.	COM.	Lights up when communication is normal. Flashes when communication is initialized. Goes out for abnormal communication.	ERROR	Lights up for abnormal communication.	<div></div> <div><table><tr><th>LED</th><th>Description</th></tr><tr><td>POWER</td><td>Lights up when power supply is ON.</td></tr><tr><td>SEND</td><td>Transmission indicator: Flashes when normal, flashes slowly when abnormal.</td></tr></table></div>	LED	Description	POWER	Lights up when power supply is ON.	SEND	Transmission indicator: Flashes when normal, flashes slowly when abnormal.
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POWER	Lights up when power supply is ON.																						
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Note	<div>• Uni-wire System Send unit: SD-120 • No. of output points: 16 points</div>	<div>• Remote I/O (RIO) System • No. of output points: 16 points</div>	<div>• S-LINK System S-LINK Controller: SL-CU1 • No. of output points: 16 points (Type SJ1) No. of output points: 8 points (Type SJ2)</div>																				
Cable wiring	<div></div>	<div></div>	<div><div>a) Type T branching multi-drop wiring (S-LINK System)</div><div>b) Crossover wiring (Sensor Link System)</div><div></div><div>The above is the example of using dedicated S-LINK flat ribbon cable SL-RCMI00.</div></div>																				

	Type SK Fuji Electric Co. Ltd. T Link Mini System	Type SDQ DeviceNet	Type SR1, SR2 OMRON Corporation CompoBus/S System																				
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Note	<ul style="list-style-type: none">• T Link Mini SystemMaster unit: FTM100BConverter: FRC100A-G02Repeater: FRC200A-C10• No. of output points: 16 points	<ul style="list-style-type: none">• DeviceNet• OMRON Corporation: CompoBus/D SystemMaster station unit: C200HW-DSM21• No. of output points: 16 points	<ul style="list-style-type: none">• CompoBus/S SystemMaster unit: C200HW-SRM21Master unit: COM1-SRM21• No. of output points: 16 points (Type SR1)No. of output points: 8 points (Type SR2)																				
Cable wiring	<div></div> <p>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).</p>	<div></div>	<div></div>																				

Name of terminal block, LED																	
Type SH NKE Corporation Uni-wire H System		Type SU JEMANET (JPCN-1)															
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Type SV Mitsubishi Electric Corporation CC-LINK System																	
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Note																	
<ul style="list-style-type: none">• Uni-wire H System Send unit: SD-H2• No. of output points: 16 points		<ul style="list-style-type: none">• JEMA Net (JPCN-1) (Reference) AJ71J92-S3 (Mitsubishi Electric Corporation) A1SJ71J92-S3 (Mitsubishi Electric Corporation) C200HW-JRM21 (OMRON Corporation) NJ-JPCN-1 (Fuji Electric Co., Ltd.) NP1L-JP1 (Fuji Electric Co., Ltd.)• No. of output points: 16 points															
Cable wiring																	

SV
SZ
SY
SYJ
SX

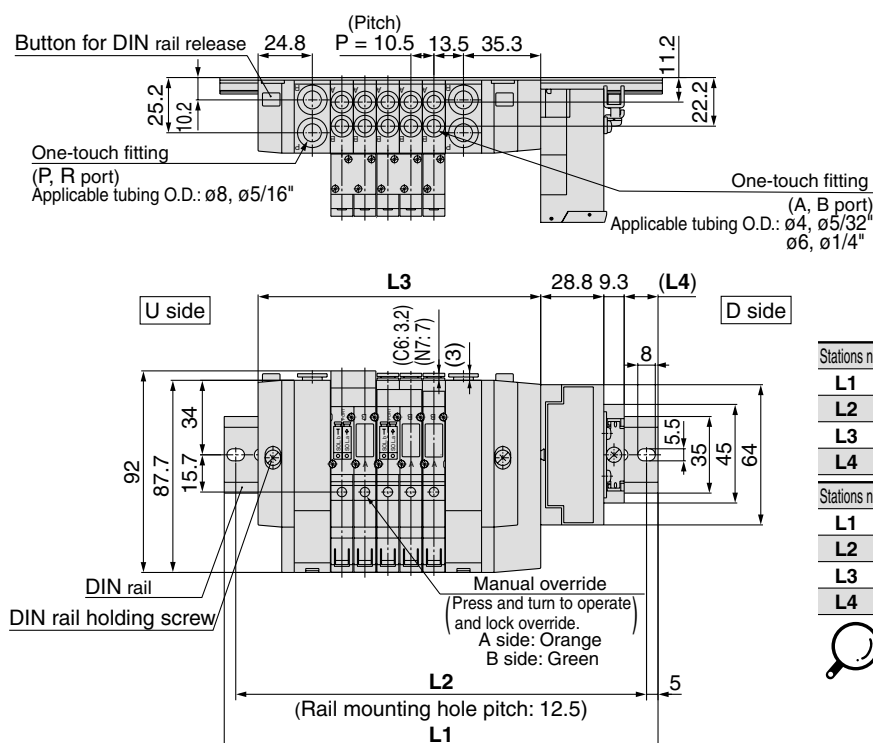
Series SY3000: Serial Transmission Unit/Plug-in

SS5Y3-45S□ - Stations U-C4, N3
C6, N7

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	160.5	173	185.5	185.5	198	210.5	223	235.5
L2	137.5	150	162.5	175	175	187.5	200	212.5	225
L3	81	91.5	102	112.5	123	133.5	144	154.5	165
L4	14.45	15.45	16.45	17.45	12.2	13.2	14.2	15.2	16.2



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.

SS5Y3-45S□ - Stations B-C4, N3
C6, N7

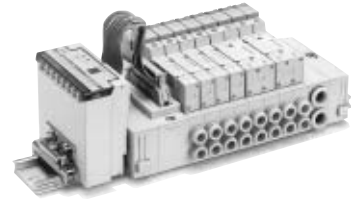
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	210.5	223	223	235.5	248
L2	150	162.5	175	187.5	200	212.5	212.5	225	237.5
L3	97.5	108	118.5	129	139.5	150	160.5	171	181.5
L4	12.45	13.45	14.45	15.45	16.45	17.45	12.2	13.2	14.2

Stations n	11 stations	12	13	14	15	16 stations
L1	260.5	273	285.5	285.5	298	310.5
L2	250	262.5	275	275	287.5	300
L3	192	202.5	213	223.5	234	244.5
L4	15.2	16.2	17.2	11.95	12.95	13.95



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.

Series SY3000/5000 Base Mounted Monifold Stacking Type/DIN Rail Mounted Serial Transmission (Separated)



How to Order Manifold

SS5Y **3** - 45S1 **A D** - **05 U** - **C4** -

Series	
3	SY3000
5	SY5000

Model

Symbol	Specifications
0	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. When a shorter rail is required (same as type 45□), suffix "0" in the optional blank at the end of part number.
- For SI unit specifications, Refer to pages 1-4-171 to 1-4-173.

SI unit mounting position

Symbol	Mounting position
U	U side
D	D side

Option

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

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø 5/32"	SY3000
N7	One-touch fitting for ø 1/4"	
M	Mixed	
N3	One-touch fitting for ø 5/32"	SY5000
N7	One-touch fitting for ø 1/4"	
N9	One-touch fitting for ø 5/16"	
M	Mixed	

* In the case of mixed specifications, 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 on the manifold specification sheet.

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
⋮	⋮	
16	16 stations	

* This also includes the number of blanking plate assemblies.
* Two stations are necessary for the double, 3 position (Dual body type).

SI Unit Part No.

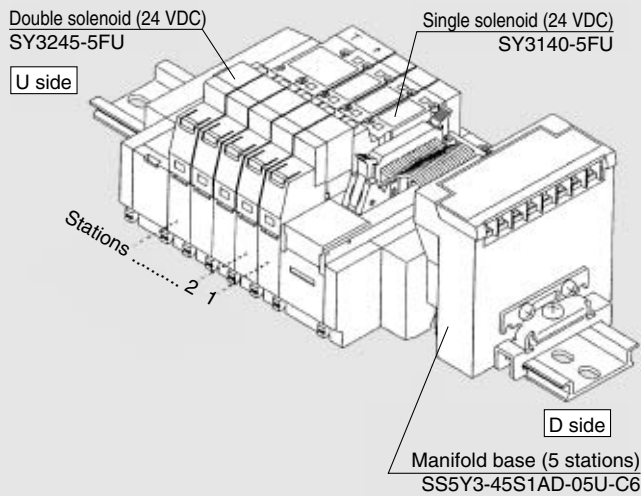
Symbol	Specifications	For SS5Y□-45S1	Symbol	Specifications:	For SS5Y□-45S1
A	With general type SI unit (Series EX300)	EX321-S001	J1	SUNX Corp.: S-LINK System (16 output points)	EX121-SSL1
B	Mitsubishi Electric Corp.: MELSECNET/ MINI-S3 Data Link System	EX121-SMB1	J2	SUNX Corp.: S-LINK System (8 output 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	Device Net: CompoBus/D (OMRON Corp.)	EX121-SDN1
E	Matsushita Electric Works: MEWNET-F System	EX121-SPA1	R1	OMRON Corp.: CompoBus/S (16 output points)	EX121-SCS1
F1	NKE Corp.: Uni-wire System (16 output points)	EX121-SUW1	R2	OMRON Corp.: CompoBus/S (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

* For terminal LED descriptions and cable wiring, etc. for each SI unit, refer to pages 1-4-171 to 1-4-173.

For external pilot specifications and built-in silencer, refer to catalog on page 1-4-196.

How to Order Valve Manifold Assembly

Ordering example



S5Y3-45S1AD-05U-C6 1 set (Type 45S1 with serial unit 5 station manifold base part no.)
 * SY3140-5FU 3 sets (Single solenoid part no.)
 * SY3245-5FU 1 set (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 SI unit.
- When ordering double solenoid valves/3 position (Dual body type), please keep in mind that they require two manifold stations.

How to Order Valves

2 position single SY 3 1 4 0 — 5 FU

Double, 3 position SY 3 2 4 5 — 5 FU

Series

3	SY3000
5	SY5000

Type of actuation

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

Dual body type (Double, 3 position)

Rated voltage

5	24 VDC
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Manual override

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

SV

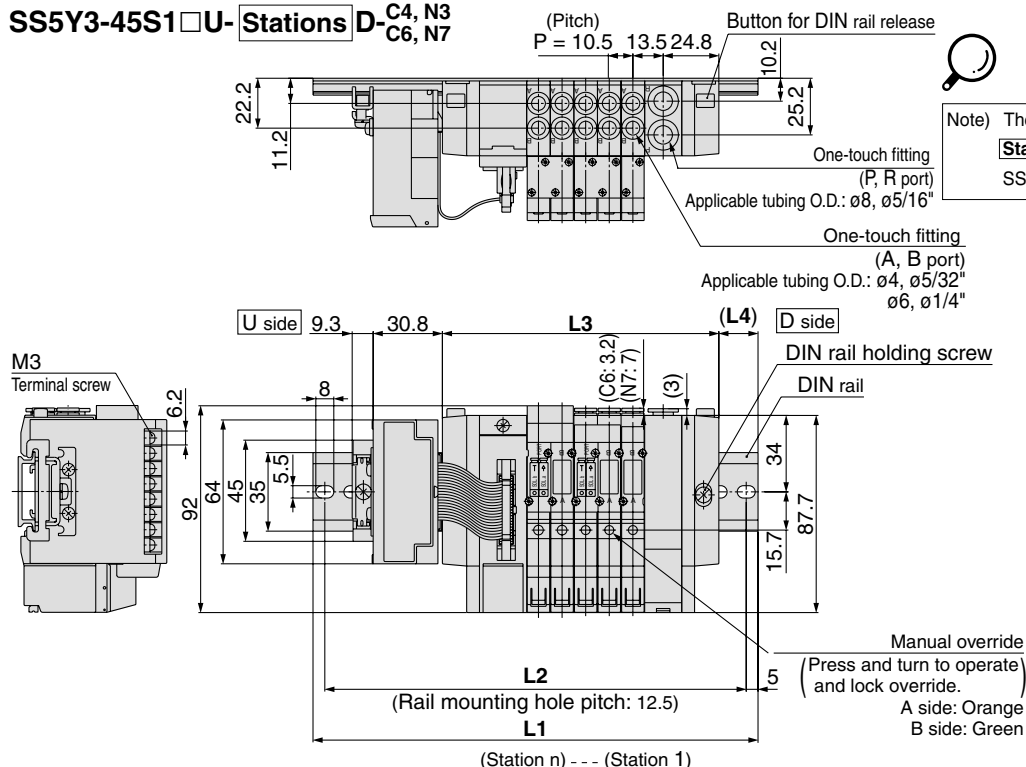
SZ

SY

SYJ

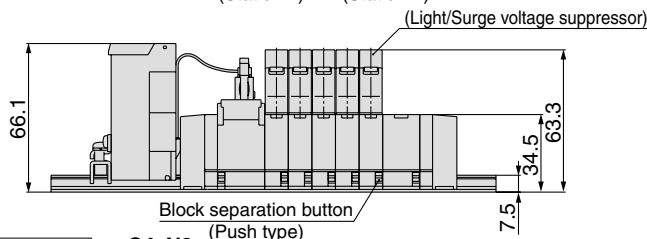
SX

SY3000: Serial Transmission Unit/Plug-in

SS5Y3-45S1□U- Stations D-^{C4, N3}_{C6, N7}

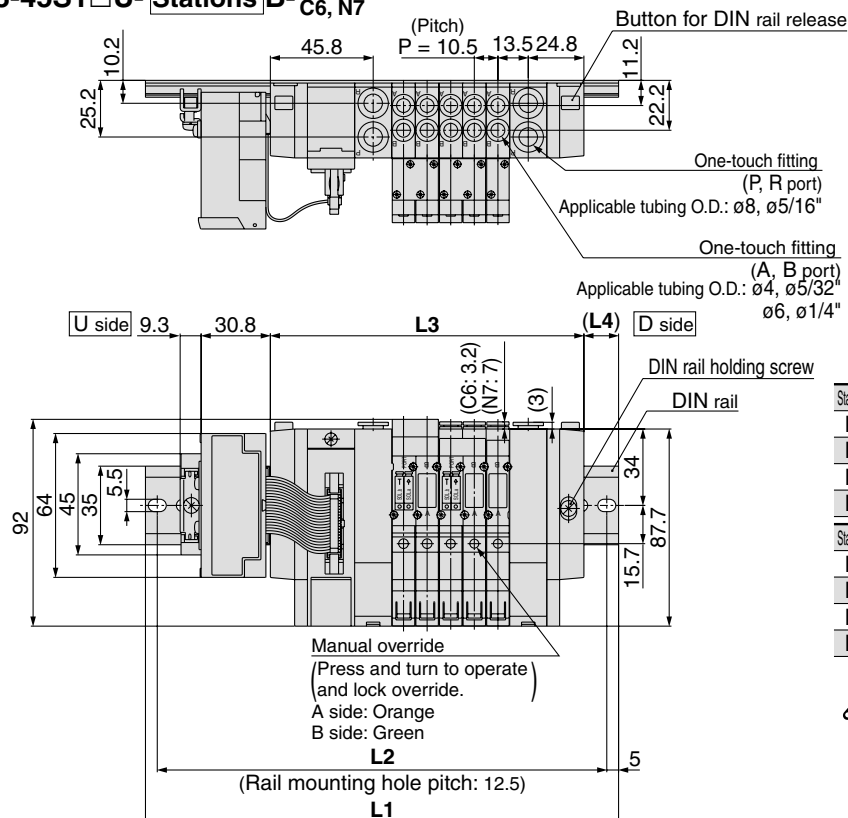
Note) The L1 to L4 dimensions of SS5Y3-45S1□U-

Stations U-^{C4, N3}_{C6, N7} are identical to those of SS5Y3-45S1□U- Stations D-^{C4, N3}_{C6, N7}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	198	210.5	223	235.5	248
L2	150	162.5	175	187.5	187.5	200	212.5	225	237.5
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	14	15	16	17	12	13	14	15	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.

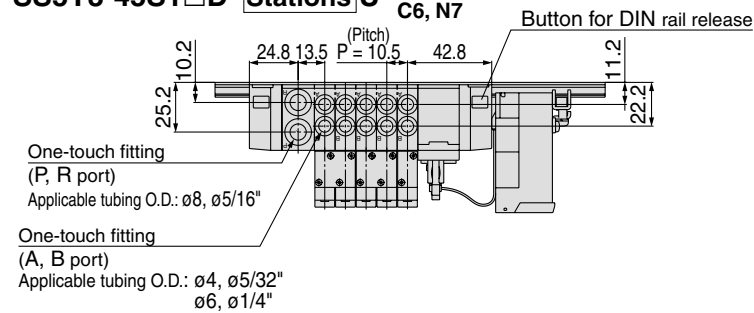
SS5Y3-45S1□U- Stations B-^{C4, N3}_{C6, N7}

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	198	210.5	223	235.5	235.5	248	260.5
L2	162.5	175	187.5	200	212.5	225	225	237.5	250
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	12	13	14	15	16	17	12	13	14

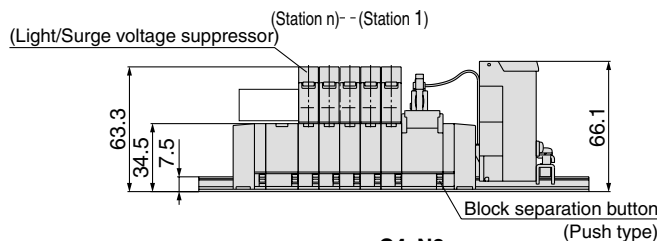
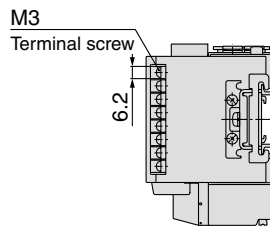
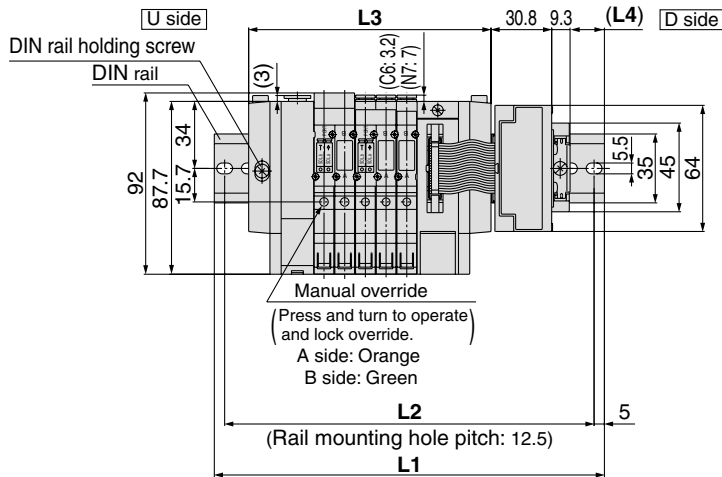
Stations n	11 stations	12	13	14	15	16 stations
L1	273	285.5	298	298	310.5	323
L2	262.5	275	287.5	287.5	300	312.5
L3	202.5	213	223.5	234	244.5	255
L4	15	16	17	11.5	12.5	13.5

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.

SY3000: Serial Transmission Unit/Plug-in

SS5Y3-45S1 □ D- Stations U- C4, N3
C6, N7

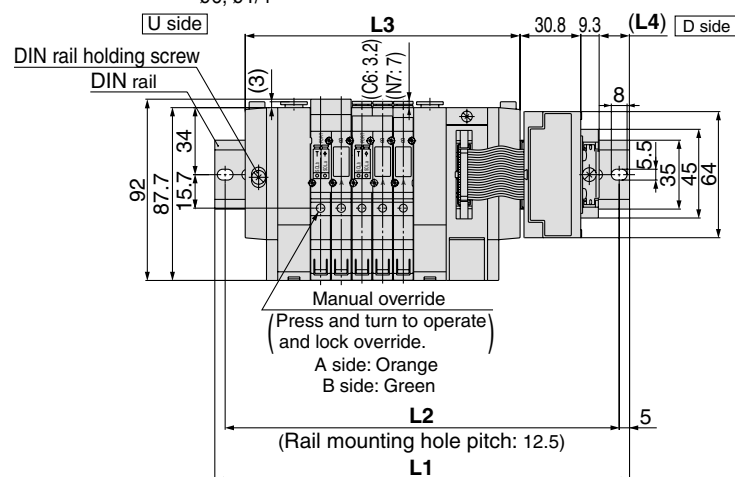
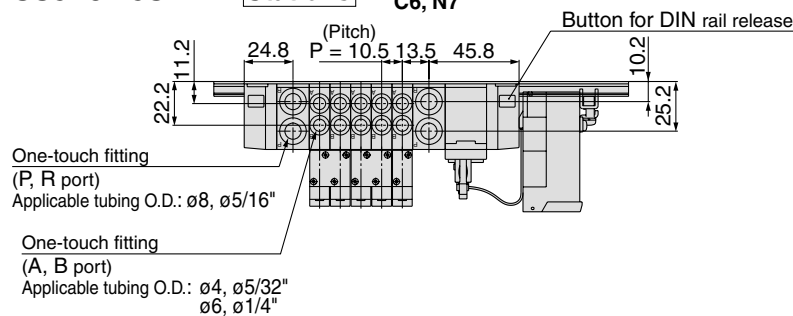
Note) The L1 to L4 dimensions of SS5Y3-45S1 □ D- Stations D- C4, N3 C6, N7 are identical to those of SS5Y3-45S1 □ D- Stations U- C4, N3 C6, N7.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	198	210.5	223	235.5	248
L2	150	162.5	175	187.5	187.5	200	212.5	225	237.5
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	14	15	16	17	12	13	14	15	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.

SS5Y3-45S1 □ D- Stations B- C4, N3
C6, N7

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	198	210.5	223	235.5	235.5	248	260.5
L2	162.5	175	187.5	200	212.5	225	225	237.5	250
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	12	13	14	15	16	17	12	13	14

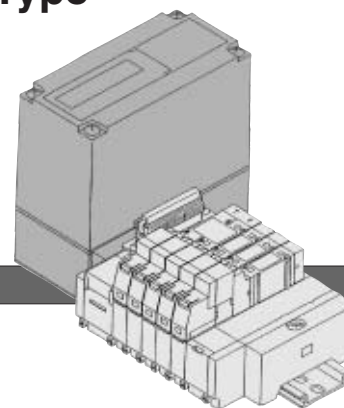
Stations n	11 stations	12	13	14	15	16 stations
L1	273	285.5	298	298	310.5	323
L2	262.5	275	287.5	287.5	300	312.5
L3	202.5	213	223.5	234	244.5	255
L4	15	16	17	11.5	12.5	13.5



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.

Type 45S2

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



Serial Transmission Manifold Equipped with SMC's IN313

How to Order Manifold

Type 45S2 (Serial type with IN313)

SS5Y **3** - 45S2 **U** - **06** **D** - **C4** -

Series

3	SY3000
5	SY5000

SI unit mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wining spec. (Applicable up to 16 solenoid valves.)
:	:	
16	16 stations	



- * This also includes the number of blanking plate assemblies.
- * Two stations are necessary for the double, 3 position (Dual body type).

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 on the manifold specification sheet.

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

- * In the case of mixed specifications, 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.
TS1	For TOSHIBA Corporation

How to Order Valves

2 position single SY **3** 1 4 0 — 5 FU

Double, 3 position SY **3** **2** 4 5 — 5 FU

Series

3	SY3000
5	SY5000

Type of actuation

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

Dual body type (Double, 3 position)

Rated voltage

5	24 VDC
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Manual override

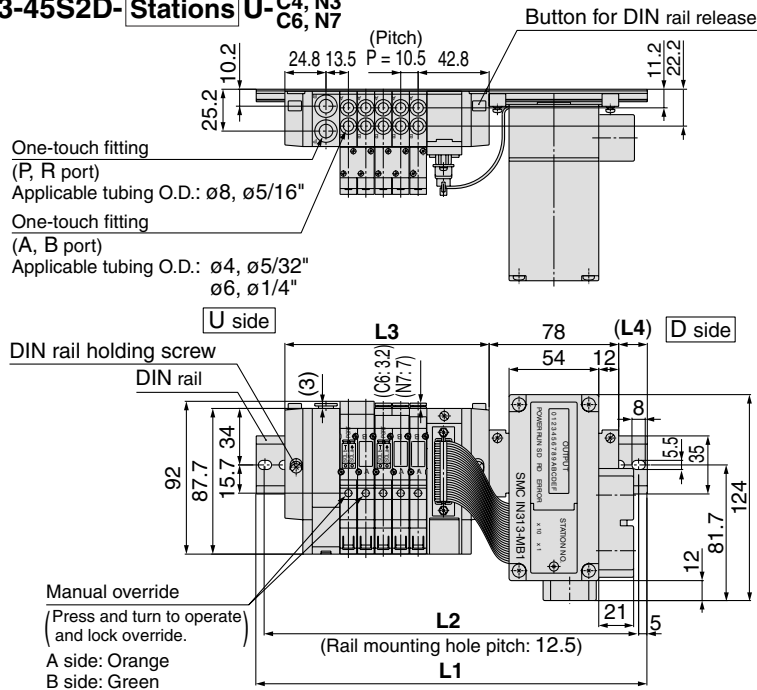
Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type



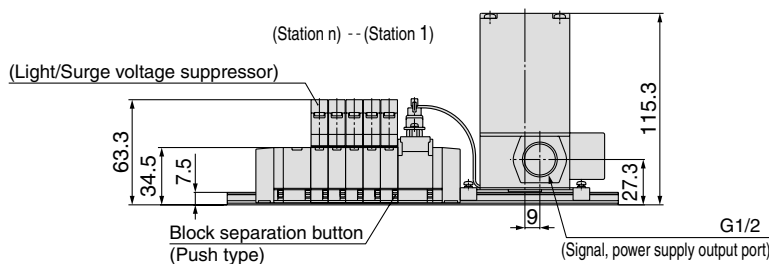
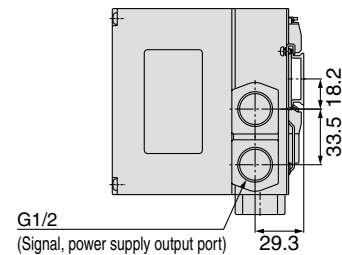
For external pilot specifications and built-in silencer, refer to page 1-4-196.

SY3000: Serial Transmission Unit/Plug-in

SS5Y3-45S2D- Stations U-C₄, N₃ C₆, N₇



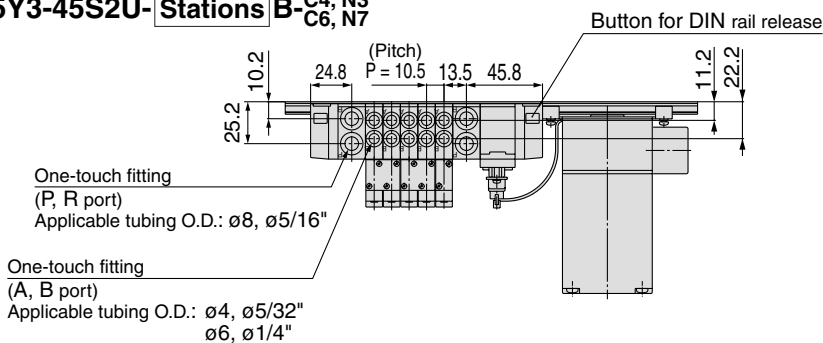
Note) The L1 to L4 dimensions of **SS5Y3-45S2D- Stations D-C₄, N₃, C₆, N₇**, **SS5Y3-45S2U- Stations D-C₄, N₃, C₆, N₇**, **SS5Y3-45S2D- Stations U-C₄, N₃, C₆, N₇** are identical to those of **SS5Y3-45S2D- Stations U-C₄, N₃, C₆, N₇**.



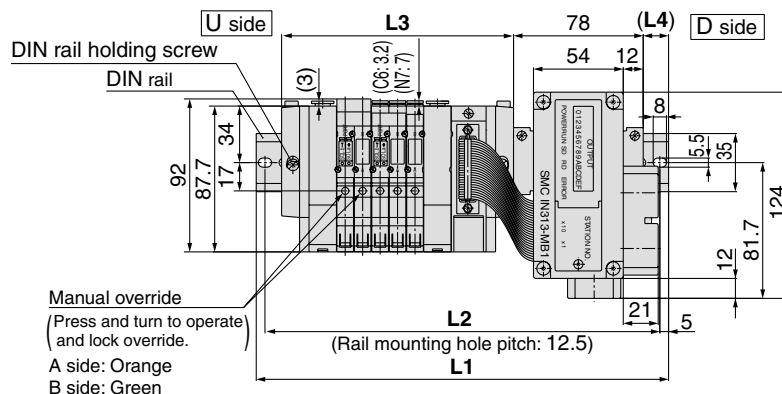
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	198	210.5	223	235.5	235.5	248	260.5	273	285.5
L2	187.5	200	212.5	225	225	237.5	250	262.5	275
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	14	15	16	17	12	13	14	15	16



SS5Y3-45S2U- Stations B-C₄, N₃ C₆, N₇



Note) The L1 to L4 dimensions of **SS5Y3-45S2U- Stations B-C₄, N₃, C₆, N₇** are identical to those of **SS5Y3-45S2D- Stations B-C₄, N₃, C₆, N₇**.

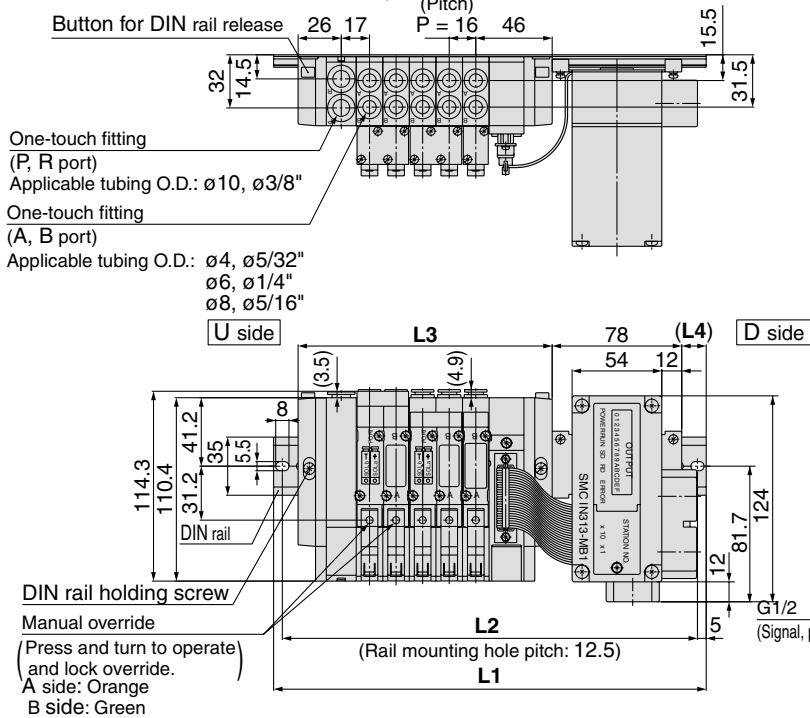


Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	210.5	223	235.5	248	260.5	273	273	285.5
L2	200	212.5	225	237.5	250	262.5	262.5	275
L3	108	118.5	129	139.5	150	160.5	171	181.5
L4	12	13	14	15	16	17	12	13

Stations n	10 stations	11	12	13	14	15	16 stations
L1	298	310.5	323	335.5	335.5	348	360.5
L2	287.5	300	312.5	325	325	337.5	350
L3	192	202.5	213	223.5	234	244.5	255
L4	14	15	16	17	11.5	12.5	13.5

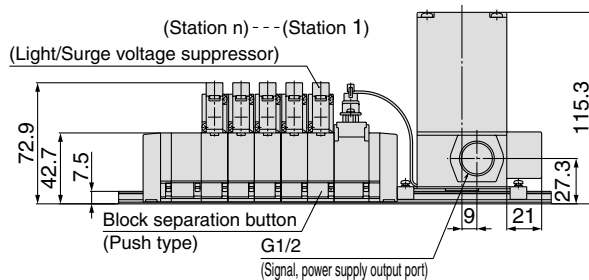
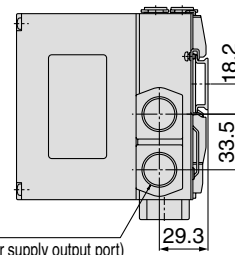
SY5000: Serial Transmission Unit/Plug-in

SS5Y3-45S2D- Stations U-C4, N3 C6, N7 C8, N9



Note) The L1 to L4 dimensions of **SS5Y3-45S2D-**

Stations D- C4, N3
C6, N7, C8, N9, **SS5Y3-45S2U-** **Stations D-** C4, N3
C6, N7, C8, N9
SS5Y3-45S2U- **Stations U-** C4, N3
C6, N7, C8, N9
those of SS5Y3-45S2D- **Stations U-** C4, N3
C6, N7, C8, N9



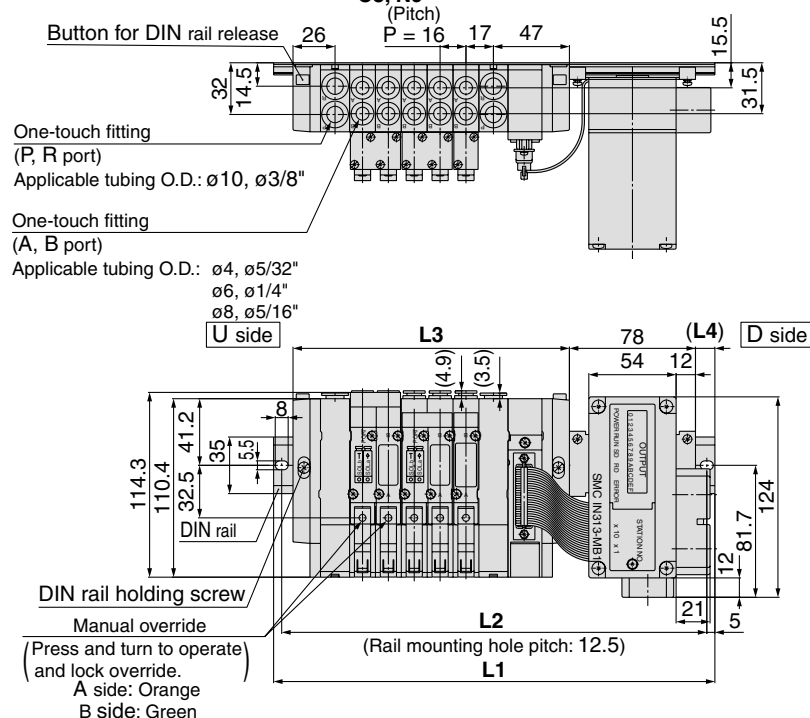
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	210.5	223	248	260.5	273	298	310.5	323	335.5
L2	200	212.5	237.5	250	262.5	287.5	300	312.5	325
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12



Note) The L1 to L4 dimensions of **SS5Y5-45S2U-**

Stations B- C4, N3
C6, N7, C8, N9 are identical to those of
SS5Y5-45S2D- **Stations B-** C4, N3
C6, N7, C8, N9

SS5Y5-45S2U- Stations B-C4, N3 C6, N7 C8, N9



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

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)

SS5Y 3 - 45S3 [] U - 06 D - C4 []

Series

3	SY3000
5	SY5000

Specifications

Symbol	Specifications
Nil	With transmission unit
0 (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 "0" 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	Single wiring spec. (Applicable up to 16 solenoid valves.)
:	:	
16	16 stations	

* This also includes the number of blanking plate assemblies.
* Two stations are necessary for the double, 3 position (Dual body type).

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 on the manifold specification sheet.

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

* In the case of mixed specifications, 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)



For external pilot specifications and built-in silencer, refer to page 1-4-196.

How to Order Valves

2 position single SY 3 1 4 0 - 5 FU []

Double, 3 position SY 3 2 4 5 - 5 FU []

Series

3	SY3000
5	SY5000

Type of actuation

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

Dual body type (Double, 3 position)

Rated voltage

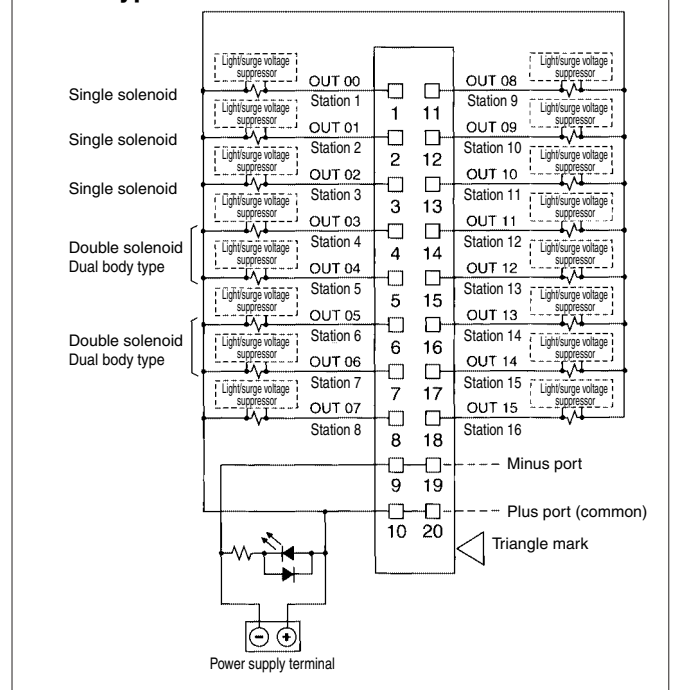
5	24 VDC
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Manual override

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

Internal Wiring of Manifold

Serial Type 45S3 (Example of arrangement)



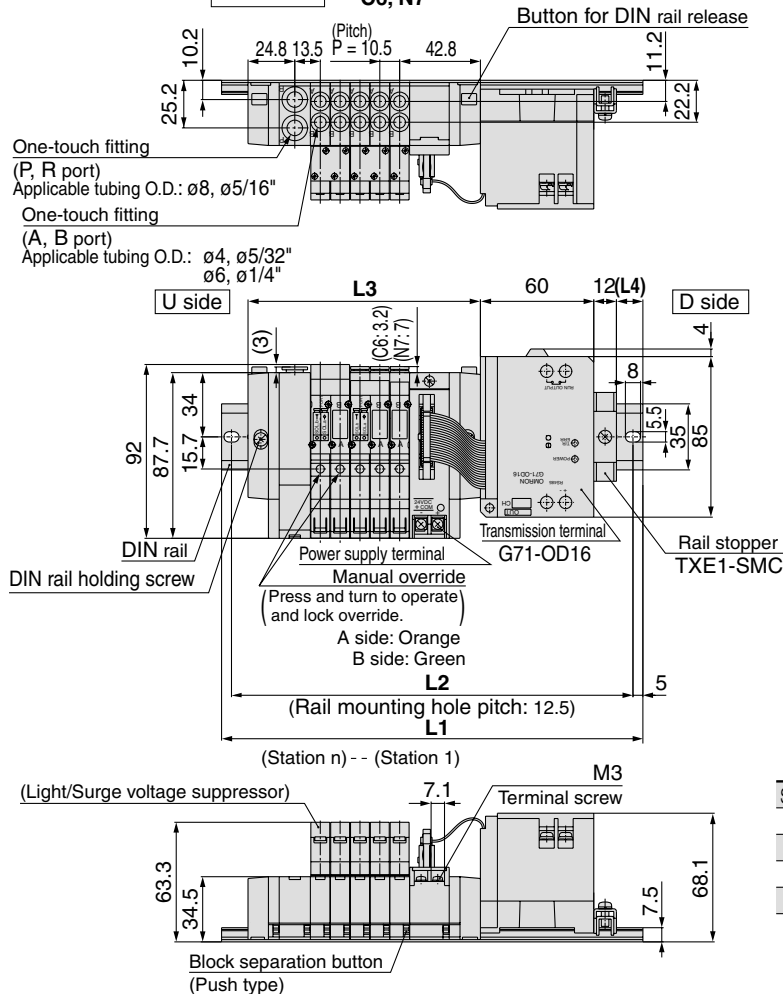
- For specifications on OMRON Corp's transmitter terminals, refer to the instruction manual or the catalog of transmitter terminals, etc.
- Max. 16 solenoids are applicable. Please consult with SMC for more solenoids.

Caution

- The wiring specifications for SS5Y³-45S30 are different from those for SS5Y³-45PG.

SY3000: Serial Transmission Unit/Plug-in

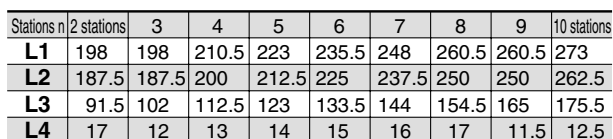
SS5Y3-45S3D- Stations U- C4, N3
C6, N7



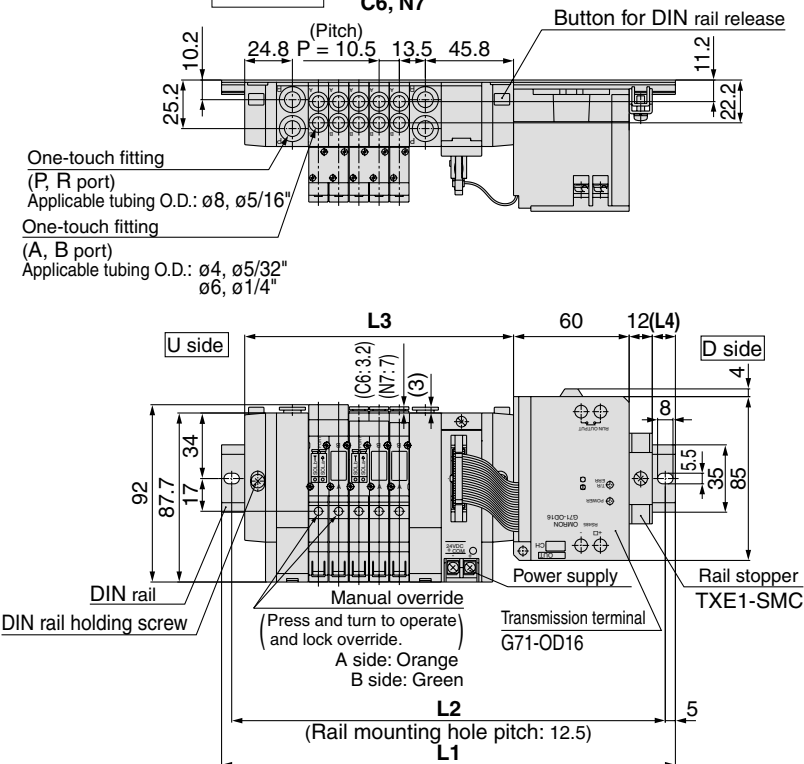
Note) The L1 to L4 dimensions of SS5Y3-45S3D-

Stations D-^{C4, N3}_{C6, N7} **SS5Y3-45S3U-** **Stations** D-

C4, N3
C6, N7, **SS5Y3-45S3U- Stations U-** C4, N3
C6, N7 are identical
to those of SS5Y3-45S3D- Stations U- C4, N3
C6, N7.



SS5Y3-45S3D- Stations **B-C4, N3**
C6, N7



Note) The L1 to L4 dimensions of SS5Y3-45S3U-

Stations B- $\begin{smallmatrix} \text{C4, N3} \\ \text{C6, N7} \end{smallmatrix}$ are identical to those of

SS5Y3-45S3D- Stations B- C4, N3
C6, N7.

Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	210.5	223	235.5	235.5	248	260.5	273	285.5
L2	200	212.5	225	225	237.5	250	262.5	275
L3	108	118.5	129	139.5	150	160.5	171	181.5
L4	15	16	17	12	13	14	15	16

Stations n	10 stations	11	12	13	14	15	16 stations
L1	298	298	310.5	323	335.5	348	360.5
L2	287.5	287.5	300	312.5	325	337.5	350
L3	192	202.5	213	223.5	234	244.5	255
L4	17	11.5	12.5	13.5	14.5	15.5	16.5

Made to Order Specifications:

Series SY3000/5000

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 materialized a clear-cut appearance.

Type **45**

Individual Wiring/Connector Box Type

How to Order Manifold

Type 45

SS5Y³₅-45(-A)-05 U R C6

Series

3	SY3000
5	SY5000

Valve stations

Symbol	Stations
02	2 stations
:	:
20	20 stations

The number of blanking plate assembly is included.

SUP/EXH block assembly mounting position

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

* For special specifications, indicate separately on the manifold specification sheet.

SUP/EXH block assembly specifications

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

Option

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

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

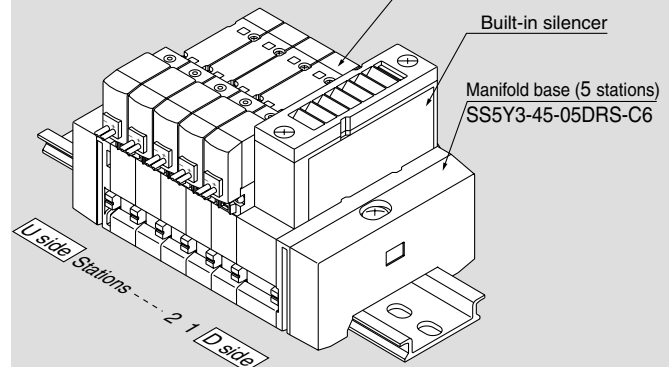
Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø9/16"	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example

Single solenoid (external pilot specifications)
SY3140R-5G (5 sets)



SS5Y3-45-05DRS-C6

1 set (External pilot with built-in silencer part no.)

* SY3140R-5G

5 sets (Single 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. For manifolds with SUP/EXH block assembly at each end of the manifold, external pilot ports and silencers will be also located at each end of the manifold. The SUP/EXH block assembly (SX3/5000-51-1A), for special usage, as shown on page 1-4-130, can also be mounted. Please specify the mounting position, by correctly filling in the blank space on the manifold specification sheet.

How to Order Valves

SY **5** **2** **40** **5** **L**

Series

3	SY3000
5	SY5000

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

Coil specifications

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

* Power saving circuit is not available in the case of "D", "DO" or "W□" type.

Rated voltage

DC

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

AC (50/60 Hz)

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

* DC specifications of type "D" and "DO" is only available with 12 and 24 VDC.
 * For type "W□", DC voltage is only available.
 * "D" and "DO" only available for SY5000.

Manual override

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

Light/Surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry for D (SY5000 only)

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

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

Electrical entry

24, 12, 6, 5, 3 VDC/100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	(SY5000 only) D: With connector DO: Without connector	WO: Without connector cable
H: Lead wire length 600 mm	LN: Without lead wire LO: Without connector	MN: Without lead wire MO: Without connector		

* "LN", "MN" type: with 2 sockets.
 * "D" and "DO" only available for SY5000.
 * DIN terminal type "Y" conforming to DIN43650C standard is also available. For details, refer to page 1-4-201.
 * Setting "5LOU" is available only for connector box type.
 * For connector cable of M8 connector, refer to pages 1-4-209 to 210.

SV

SZ

SY

SYJ

SX

Plug-in

How to Order Manifold

Type 45

SS5Y³₅-45 **F** **U** **05** **U** **R**

Series	
3	SY3000
5	SY5000

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
S□	Serial transmission type

* For details, refer to page 1-4-140.

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wining specifications
⋮	⋮	
20	20 stations	

- * This also includes the number of blanking plate assemblies.
- * Depending on the connector, the number of stations is limited. Refer to page 1-4-143.
- * Two stations are necessary for the double, 3 position (Dual body type).

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 on the manifold specification sheet.

SUP/EXH block assembly specifications

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

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

Voltage

Nil	24 VDC
12V	12 VDC

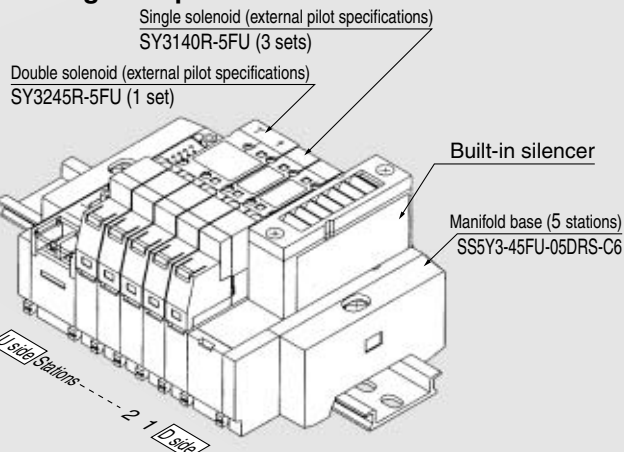
No symbol is used for T, T1, S□ types.

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



SS5Y3-45FU-05DRS-C6 1 set (External pilot with built-in silencer part no.)
 * **SY3140R-5FU** 3 sets (Single solenoid part no.)
 * **SY3245R-5FU** 1 set (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. 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. The SUP/EXH block assembly (SX3/5000-51-1A), for special usage, as shown on page 1-4-130, can also be mounted. Please specify the mounting position, by correctly filling in the blank space on the manifold specification sheet. Two stations of the manifold base are necessary for the double, 3 position (Dual body type). Use caution when specifying the number of stations required for the manifold base.

How to Order Valves

SY **3** **1** **4** **5** **FU**

Series

3	SY3000
5	SY5000

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

Body Option

0	Standard (Single only)
5	Dual body type (Double, 3 position)

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

Manual override

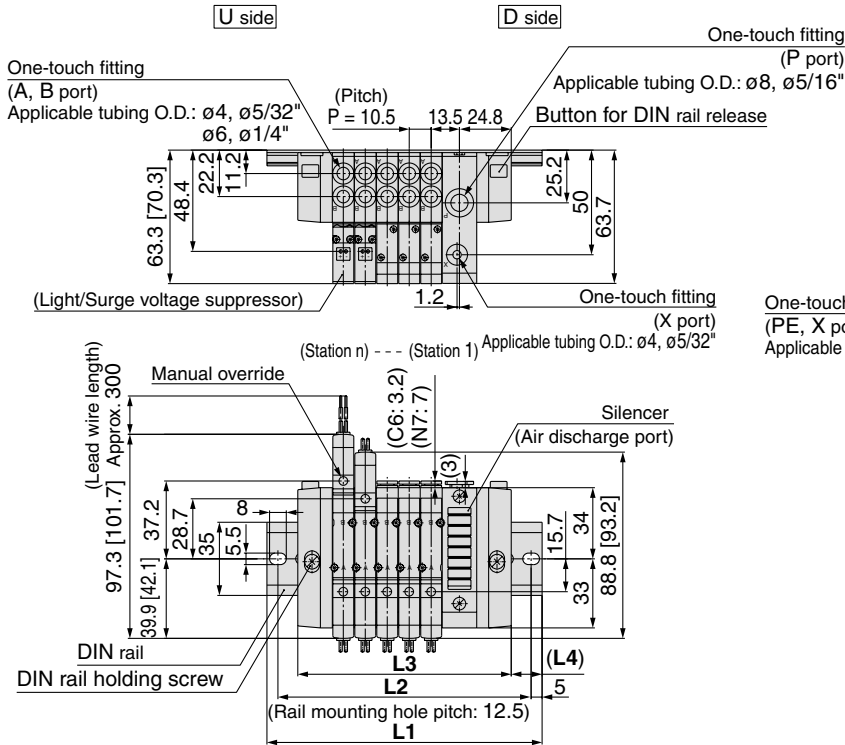
Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

* Mark: 45T and T1 only
 S□ type is available for 24 VDC only.

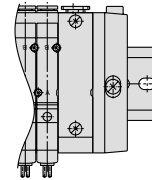
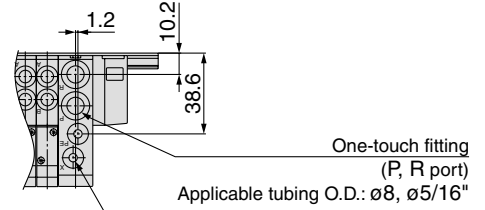
External Pilot/Built-in Silencer



SY3000: SS5Y3-45- Stations DRS- C4, N3 C6, N7



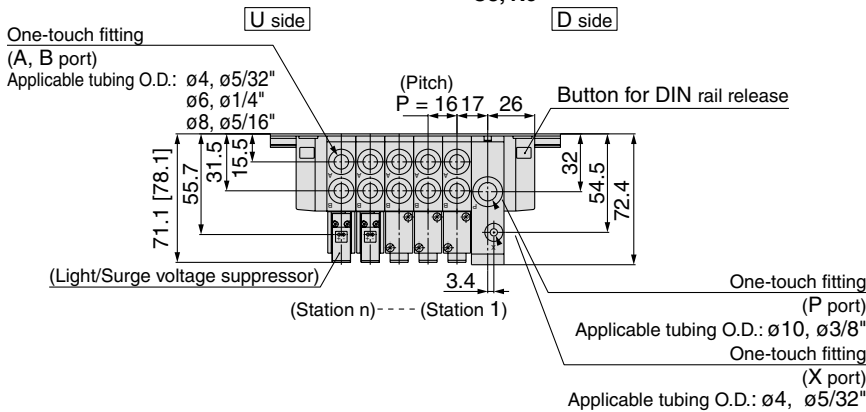
SS5Y3-45- Stations DR- C4, N3 C6, N7



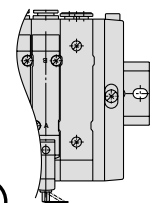
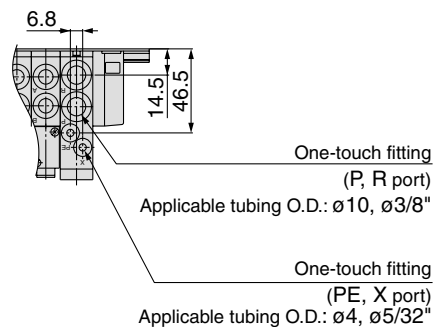
* The dimensions L1 to L4 are identical to those of

SS5Y3-45- Stations U C4, N3
D C6, N7
B C8, N9

SY5000: SS5Y5-45- Stations DRS- C4, N3 C6, N7 C8, N9



SS5Y5-45- Stations DR- C4, N3 C6, N7 C8, N9



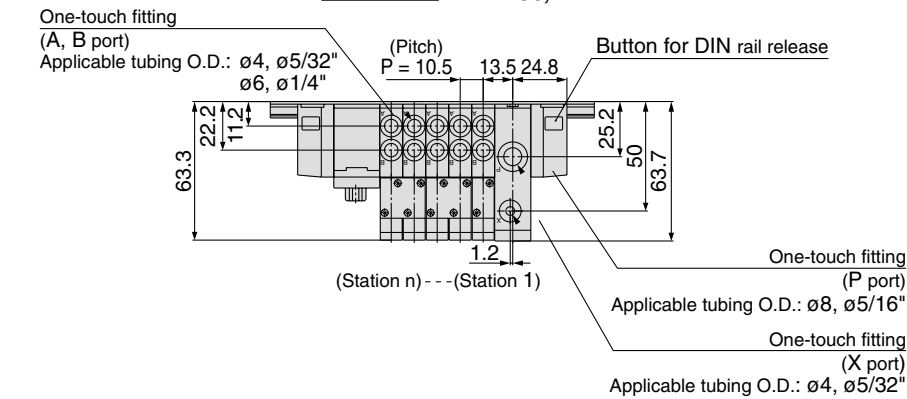
* The dimensions L1 to L4 are identical to those of

SS5Y3-45- Stations U C4, N3
D C6, N7
B C8, N9

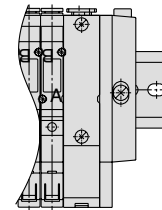
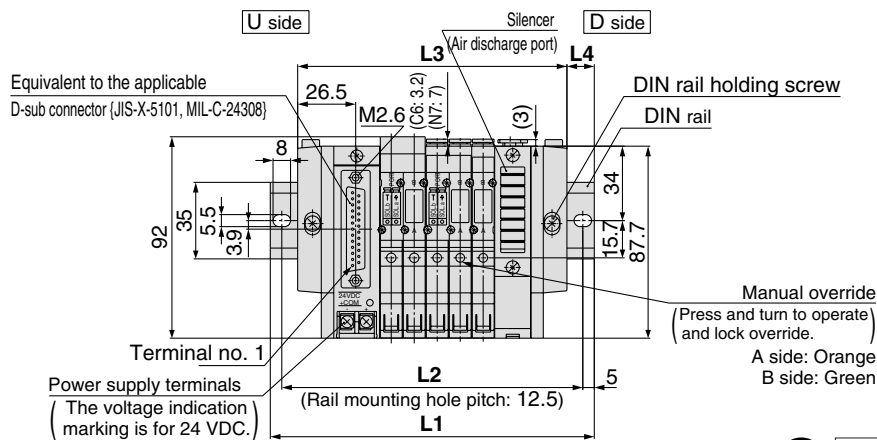
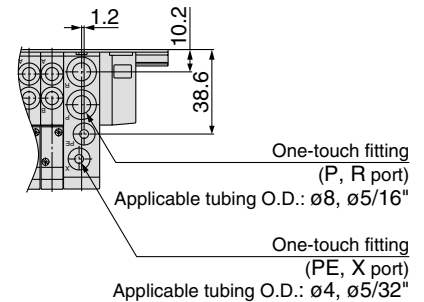
* The dimensions of SS5Y³-45- Stations URS are identical to those of SS5Y³-45F- Stations DRS.

External Pilot/Built-in Silencer

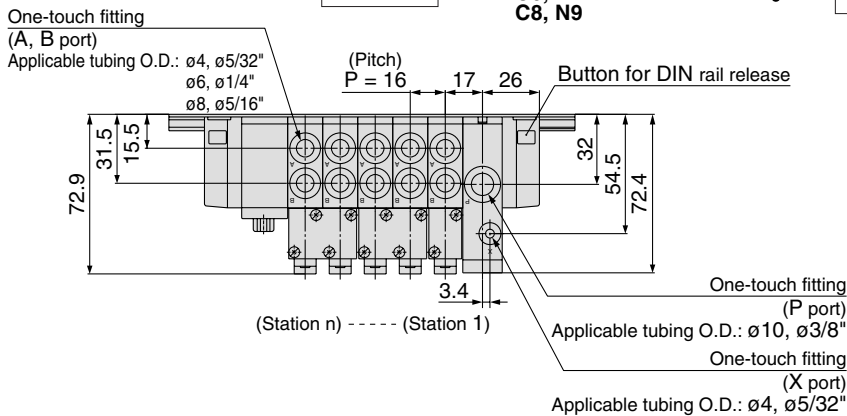
SY3000: SS5Y3-45FU- Stations DRS- C4, N3 C6, N7



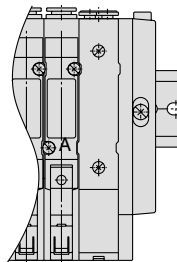
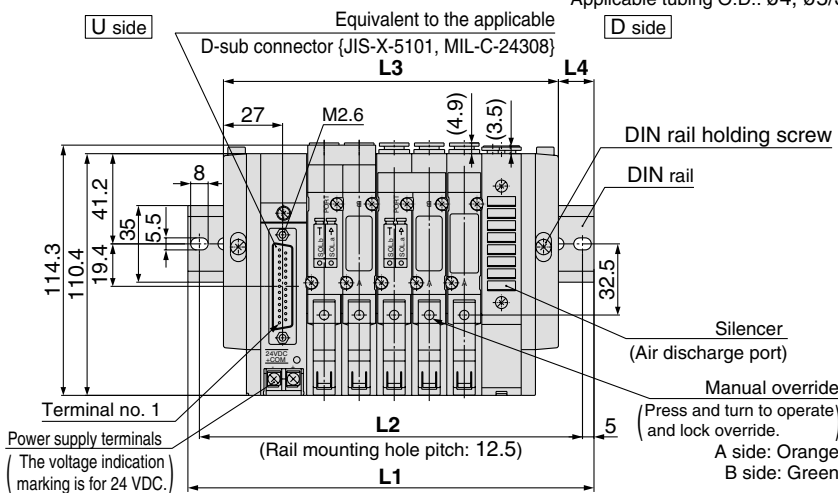
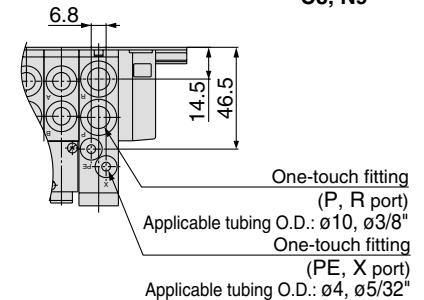
SS5Y3-45FU- Stations DR- C4, N3 C6, N7



SY5000: SS5Y5-45FU- Stations DRS- C4, N3 C6, N7 C8, N9



SS5Y5-45FU- Stations DR- C4, N3 C6, N7 C8, N9



* The dimensions L1 to L4 are identical to those of
SS5Y3-45FU- Stations U C4, N3
D C6, N7

* The dimensions L1 to L4 are identical to those of
SS5Y3-45FU- Stations U C4, N3
D C6, N7
B C8, N9

* The dimensions of SS5Y5-45FU- Stations URS are identical to
those of SS5Y5-45FU- Stations DRS.

Type **M45**

Made to Order Specifications:

Series SY3000/5000

Mixed Mounting

Non plug-in

Use SY3000 together with SY5000, which has a large Cv and is mounted only in a place where it is needed, permits a selection of economic manifold bases.

How to Order Manifold

Type M45 (Mixed mounting type)

SS5Y5-M45-05 U C86

Mixed mounting type

Valve stations

Symbol	Stations	SUP/EXH block assembly mounting position
02	2 stations	U
20	20 stations	D
		B
		M

The number of blanking plate ass'y is included, too.

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 on the manifold specification sheet.

SUP/EXH block assembly specifications

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

* External pilot is unavailable for mixed mounting style.

Option

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

A, B port size

One-touch fitting (Metric size)

Symbol	Port size
C44	SY5000: One-touch fitting for ø4 SY3000: One-touch fitting for ø4
C46	SY5000: One-touch fitting for ø4 SY3000: One-touch fitting for ø6
C64	SY5000: One-touch fitting for ø6 SY3000: One-touch fitting for ø4
C66	SY5000: One-touch fitting for ø6 SY3000: One-touch fitting for ø6
C84	SY5000: One-touch fitting for ø8 SY3000: One-touch fitting for ø4
C86	SY5000: One-touch fitting for ø8 SY3000: One-touch fitting for ø6
M	Mixed

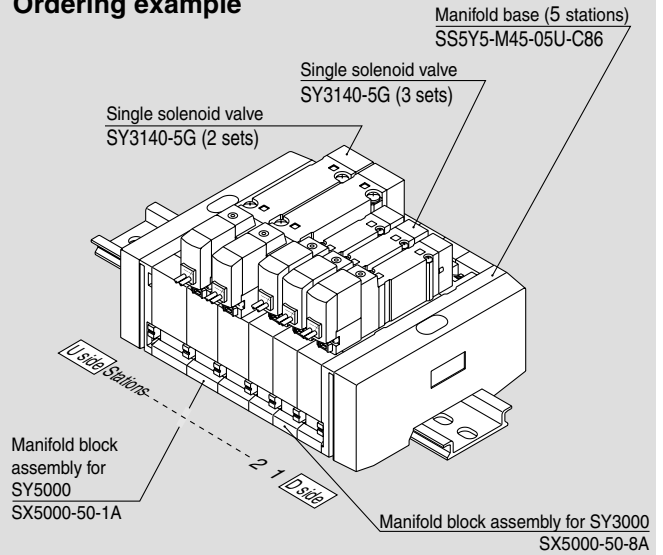
One-touch fitting (Inch size)

Symbol	Port size
N33	SY5000: One-touch fitting for ø5/32" SY3000: One-touch fitting for ø5/32"
N37	SY5000: One-touch fitting for ø5/32" SY3000: One-touch fitting for ø1/4"
N73	SY5000: One-touch fitting for ø1/4" SY3000: One-touch fitting for ø5/32"
N77	SY5000: One-touch fitting for ø1/4" SY3000: One-touch fitting for ø1/4"
N93	SY5000: One-touch fitting for ø5/16" SY3000: One-touch fitting for ø5/32"
N97	SY5000: One-touch fitting for ø5/16" SY3000: One-touch fitting for ø1/4"
M	Mixed

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example



SS5Y5-M45-05U-C86 1 set (Type M45, manifold base part no.)
*** SY3140-5G** 3 sets (Single solenoid part no.)
*** SY5140-5G** 2 sets (Single 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.

SV

SZ

SY

SYJ

SX

How to Order Valves

SY 5 2 40 5 L

Series

3	SY3000
5	SY5000

Type of actuation

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

Coil specifications

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

* Power saving circuit is not available in the case of "D", "DO" or "W□" type.

Rated voltage

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

AC (50/60 Hz)	100 VAC	200 VAC	110 VAC [115 VAC]	220 VAC [230 VAC]
1				
2				
3				
4				

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

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry

24, 12, 6, 5, 3 VDC/100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
Grommet	L plug connector
G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)
H: Lead wire length 600 mm	LN: Without lead wire
	LO: Without connector
	M: With lead wire (Length 300 mm)
	MN: Without lead wire
	MO: Without connector
	WO: Without connector cable

* "LN", "MN" type: with 2 sockets.
 * For connector cable of M8 connector, refer to page 1-4-209.

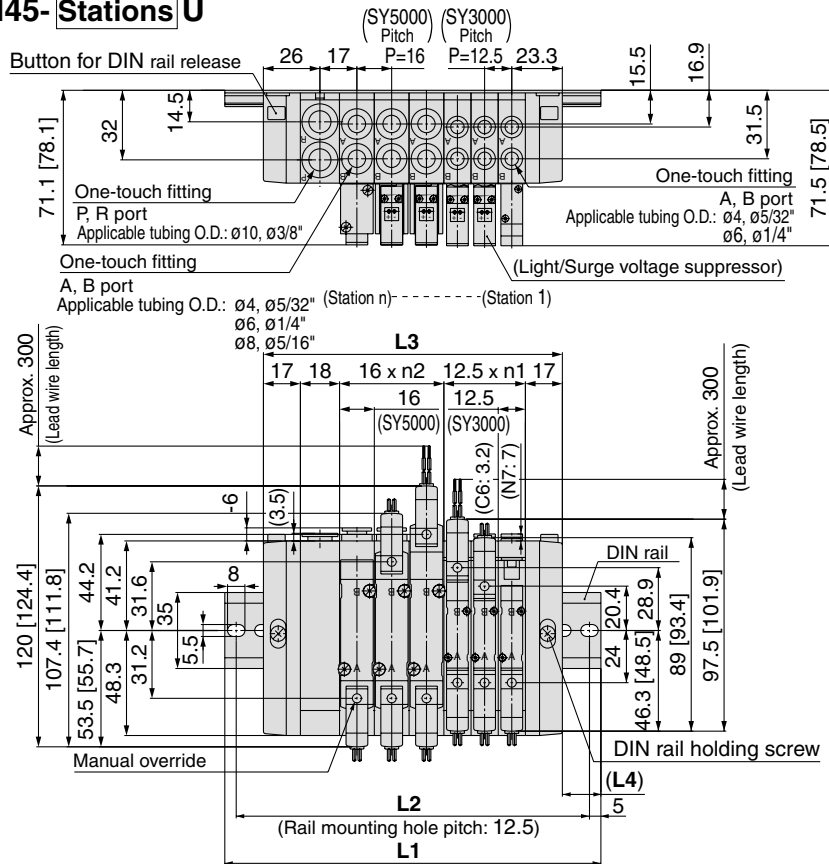
Manual override

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

Dimensions: Mixed Mounting



SS5Y5-M45- Stations U

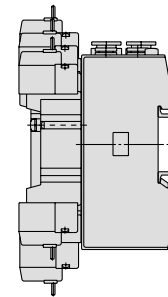


L dimension: Formulae for L1, L4
 $L3 = 12.5 \times n1 + 16 \times n2 + 52$
 $M = \left(\frac{L3}{12.5} + 1 \right)$ Omit decimals
 $L1 = 12.5 \times M + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3) / 2$

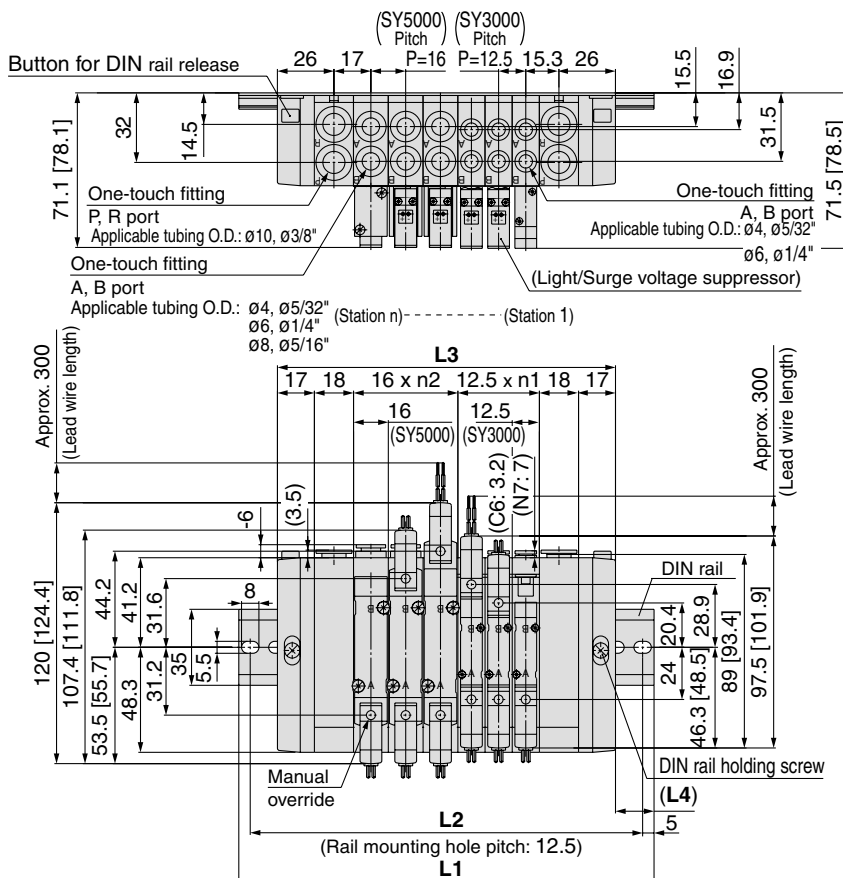
n1 = Number of SY3000
 n2 = Number of SY5000



Note) The L1 to L4 dimensions of **SS5Y5-M45- Stations D** are identical to those of **SS5Y5-M45- Stations U**.

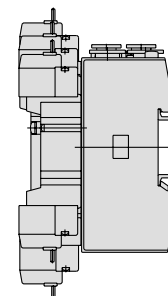


SS5Y5-M45- Stations B



L dimension: Formulae for L1, L4
 $L3 = 12.5 \times n1 + 16 \times n2 + 70$
 $M = \left(\frac{L3}{12.5} + 1 \right)$ Omit decimals
 $L1 = 12.5 \times M + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3) / 2$

n1 = Number of SY3000
 n2 = Number of SY5000



Made to Order Specifications:

Series SY5000/7000/9000, SY500

DIN Terminal* (DIN 43650C)

* DIN terminal type conforming to DIN 43650C (DIN pitch 8 mm) standard.

How to Order Valves

Series

5	SY500
---	-------

Type of actuation

1	Normally open
2	Normally closed

Type

3	Body ported
5	Base mounted

A port size

Symbol	Port size
Nil	Base mounted
01	1/8
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N3	One-touch fitting for ø3/32"
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

3 port valve
(5 port valve mixed mounting style)

5 port valve

Series

5	SY5000
7	SY7000
9	SY9000

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

Body type

2	Body ported
4	Base mounted

Pilot type

Nil	Internal pilot
R*	External pilot

* Base mounted type only.

Rated voltage

DC	
5	24 VDC
6	12 VDC
AC (50/60Hz)	
1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

Electrical entry

Y: With connector

YO: Without connector

Light/Surge voltage suppressor

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

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

Manual override

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

For body ported Thread piping

Symbol	Port size	Applicable series
01	1/8	SY5000
02	1/8	SY7000
03	3/8	SY9000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000
C8	One-touch fitting for ø8	SY7000
C10	One-touch fitting for ø10	SY7000
C8	One-touch fitting for ø8	SY9000
C10	One-touch fitting for ø10	SY9000
C12	One-touch fitting for ø10	SY9000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	SY5000
N9	One-touch fitting for ø5/16"	SY5000
N9	One-touch fitting for ø5/16"	SY7000
N11	One-touch fitting for ø3/8"	SY7000
N9	One-touch fitting for ø5/16"	SY9000
N11	One-touch fitting for ø3/8"	SY9000

Base Mounted

Symbol	Port size	Applicable series
Nil	Without sub-plate	
02	1/4 With sub-plate	SY5000 SY7000
03	3/8 With sub-plate	SY7000 SY9000
04	1/2 With sub-plate	SY9000

Note) When placing an order for body ported solenoid valve as a single unit, mounting bolt for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to catalog on page 1-4-61.)

How to Order Pilot Valve Assembly

V115-5Y

Rated voltage

DC	
5	24 VDC
6	12 VDC
AC (50/60Hz)	
1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

Light/Surge voltage suppressor

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

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

Electrical entry

Y	DIN	With connector
YO	terminal	Without connector

DIN Terminal Part No.

Without light			SY100-82-1
With indicator light			
Rated voltage	Voltage symbol	No.	
24 VDC	24VN	SY100-82-3-05	
12 VDC	12VN	SY100-82-3-06	
100 VAC	100VN	SY100-82-3-01	
200 VAC	200VN	SY100-82-3-02	
110 VAC (115 VAC)	110VN	SY100-82-3-03	
220 VAC (230 VAC)	220VN	SY100-82-3-04	

Caution

- Use caution in wiring because it won't meet the IP65 (enclosure) standard if you use the other cord than prescribed heavy-duty cord of size (ø3.5 to ø7.5). Also be sure to tighten the ground nut and holding screw with the prescribed torque range. Tighten the ground nut and set screw within the specified range of torque. For how to use DIN terminal. (wiring procedures, procedures for changing electrical entries, precautions, applicable cable circuit diagram), refer to page 1-4-207.
- Type D, DIN terminal with 9.4 mm pitch between terminals if not interchangeable.
- To distinguish from the Type D, DIN connector, "N" is listed at the end of voltage symbol. (For connector parts without lights, "N" is not indicated. Please refer to the name plate to distinguish.)
- Dimensions are completely the same as type D DIN terminal.
- When exchanging the pilot valve assembly only, "SY115-□D" is interchangeable with "SY115-□Y". Do not replace SY114 (G, L, M) to SY115 (DIN terminal), and vice versa.

Made to Order Specifications:

Series SY3000/5000/7000/9000

Body Ported

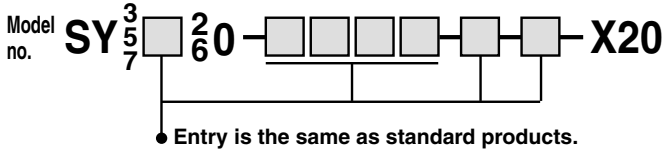
External Pilot/Fluoro Rubber



* for Main Value

Body Ported External Pilot

Applicable solenoid valves: Series SY3□²₆0, SY5□²₆0, SY7□²₆0



Operating Pressure Range MPa

Operating pressure range	-100 kPa to 0.7
Pilot pressure range	0.25 to 0.7

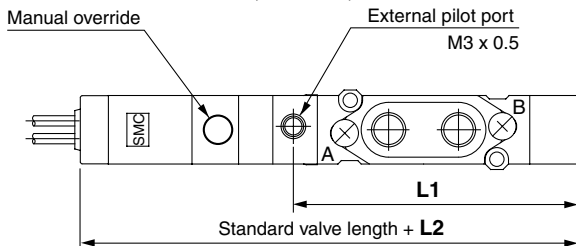
Dimensions: For SY3□²⁰₆₀60, SY5□²⁰₆₀60, SY7□²⁰₆₀60

Dimensions SY3000 becomes 6.5 mm longer.
SY5000 and SY7000 becomes 10 mm longer.

External Pilot Port

Series	Port size
SY3000	M3 x 0.5
SY⁵000	M5 x 0.8

Dimensions: For SY3□²⁰₆₀60, SY5□²⁰₆₀60, SY7□²⁰₆₀60

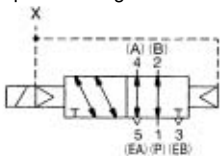


Dimensions/External Pilot Port Position

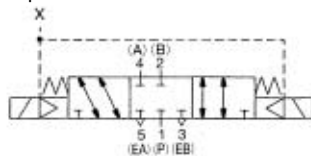
Series	L1 dimensions	L2 dimensions
SY3000	41.5	6.5
SY5000	60.4	9
SY7000	71.9	9

JIS Symbol

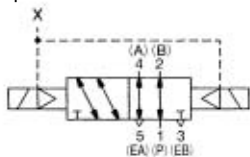
Body ported
2 position single



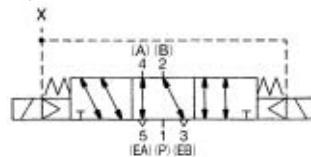
3 position closed center



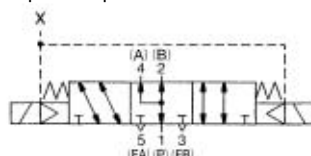
2 position double



3 position exhaust center



3 position pressure center

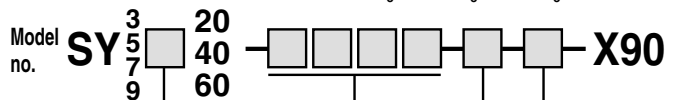


Main Valve Fluoro Rubber Specifications

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

- 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.

Applicable solenoid valves: Series SY3□²₆0, SY5□²₆0, SY7□²₆0, SY9□²₄0



- Entry is the same as standard products.

Specifications and performance are the same as standard products.