

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 $\phi 4$ | SY3000 |
| C6 | One-touch fitting for $\phi 6$ | |
| M | Mixed | SY5000 |
| C4 | One-touch fitting for $\phi 4$ | |
| 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 | SY5000 |
| N3 | One-touch fitting for $\phi 5/32$ " | |
| N7 | One-touch fitting for $\phi 1/4$ " | |
| N9 | One-touch fitting for $\phi 5/16$ " | |
| M | Mixed | |

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

Option

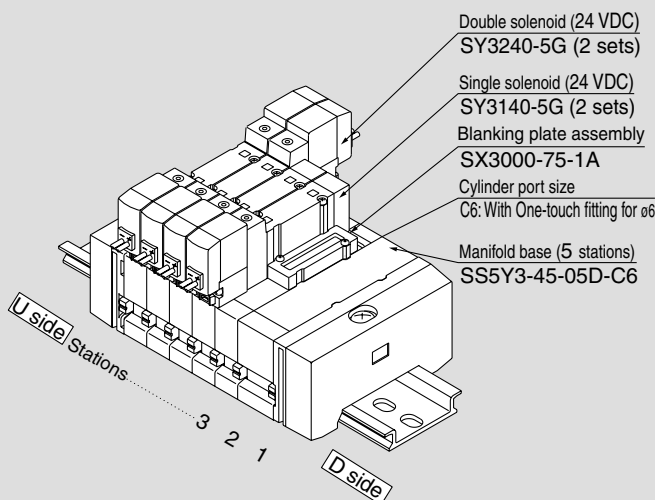
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)



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 | L: With lead wire (Length 300 mm) LN: Without lead wire | M: With lead wire (Length 300 mm) MN: Without lead wire | (SY5000) D: With connector DO: Without connector | WO: Without connector cable |
| H: Lead wire length 600 mm | LO: Without connector | 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.
 * For connector cable of M8 connector, refer to page 1-4-209.

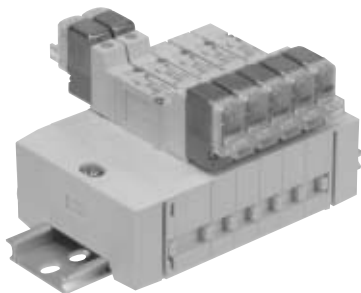
SV

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) C6 (One-touch fitting for ø6) | C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8) |
| Manifold base weight W (g), n: Stations | | 2 to 10 stations: W = 22n + 118 11 to 20 stations: W = 22n + 140 | 2 to 10 stations: W = 47n + 156 11 to 20 stations: W = 47n + 190 |



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

Flow Characteristics

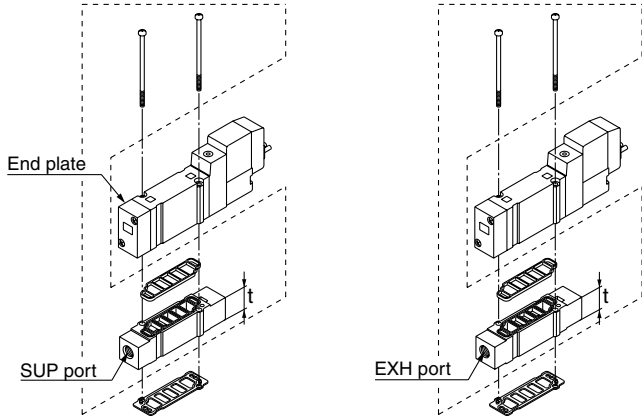
| Model | Port size | | Flow characteristics | | | | | |
|-----------------|------------------------|----------------|----------------------------|------|------|----------------------------|------|------|
| | 1, 5, 3 (P, EA, EB) | 4, 2 (A, B) | 1 → 4/2 (P → A/B) | | | 4/2 → 5/3 (A/B → EA/EB) | | |
| | | | 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



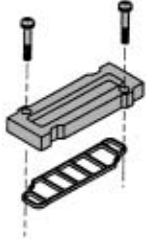
| Series | Assembly part no. | Port size | t |
|--------|-------------------|-----------|----|
| SY3000 | SY3000-38-2A | M5 x 0.8 | 11 |
| SY5000 | SY5000-38-16*A | 1/8 | 15 |

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 | SX5000-76-5A |

* Thread type

| | |
|-----|------|
| Nil | Rc |
| F | G |
| N | NPT |
| T | NPTF |

Caution

Mounting screw tightening torques

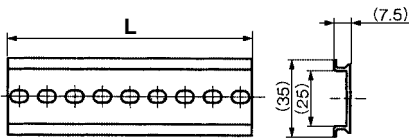
M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

▪ 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.)



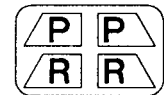
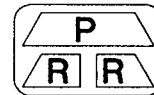
| Series | Part no. |
|--------|--------------|
| SY3000 | SX3000-77-1A |
| SY5000 | SX5000-77-1A |

▪ 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

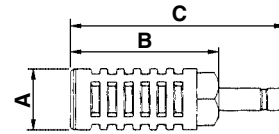
Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



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

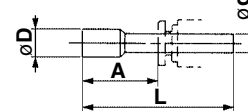
The silencer plugs directly into the One-touch fittings of the manifold.



| 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

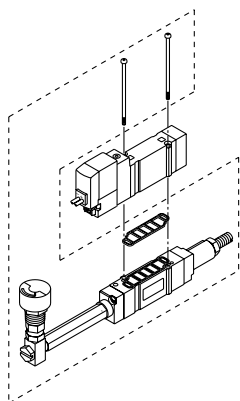
● **Regulating port**

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

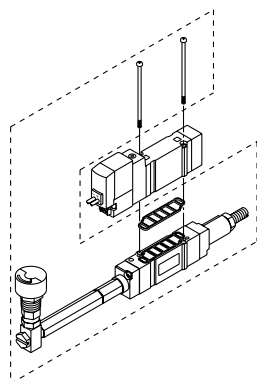
● **Pressure gauge connection port**

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

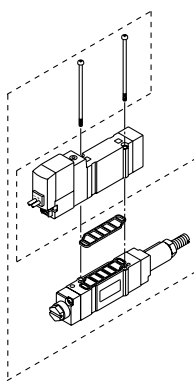
ARBY3000-05-□-2
(For mounting odd number stations)



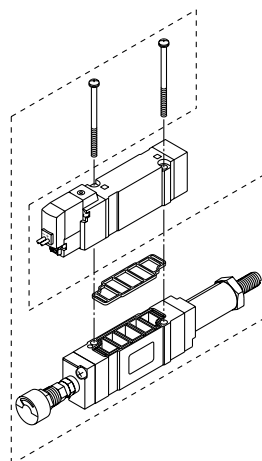
ARBY3000-06-□-2
(For mounting even number stations)



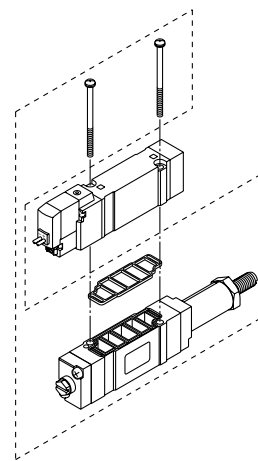
ARBY3000-M1-□-2



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

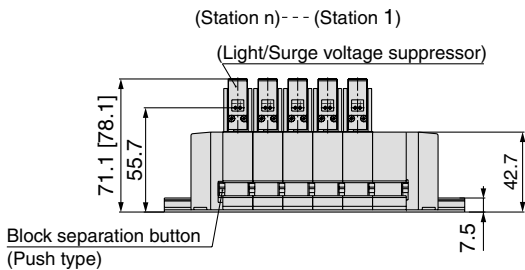
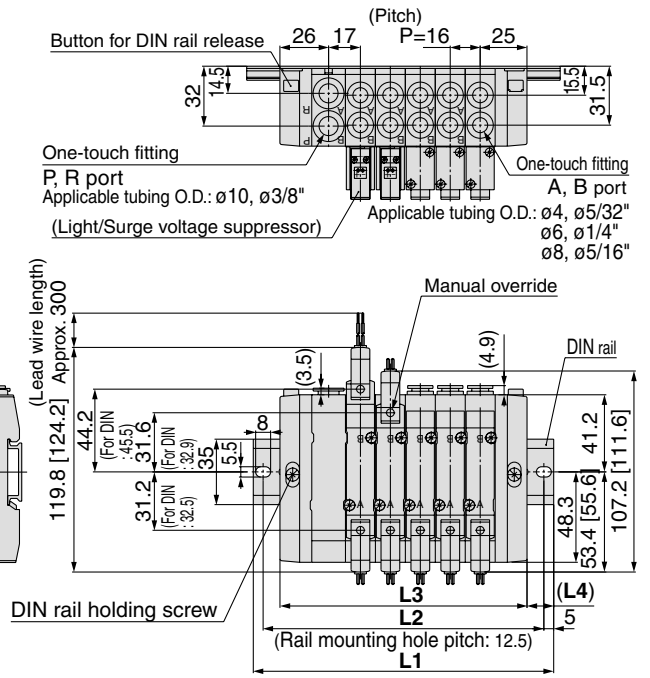
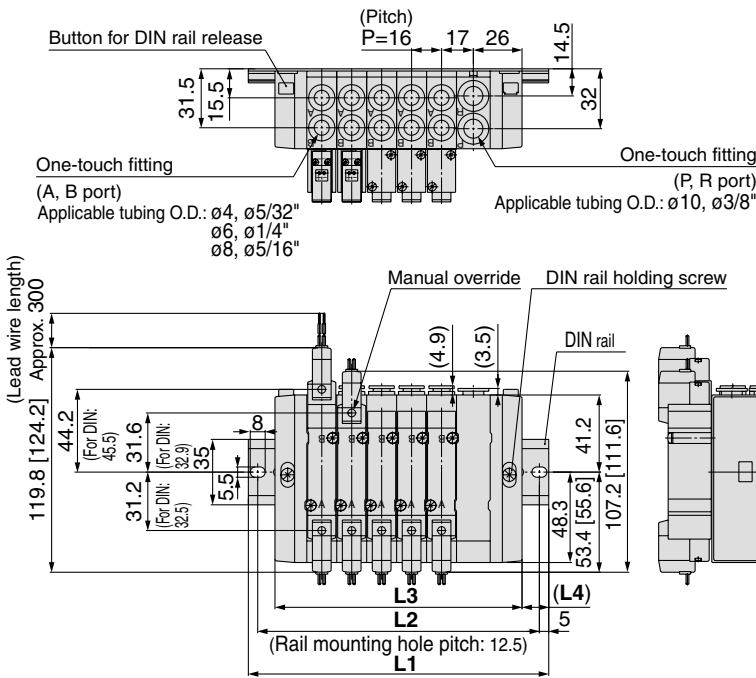
M2: 0.17 N·m
M3: 0.8 N·m



Dimensions: Series SY5000

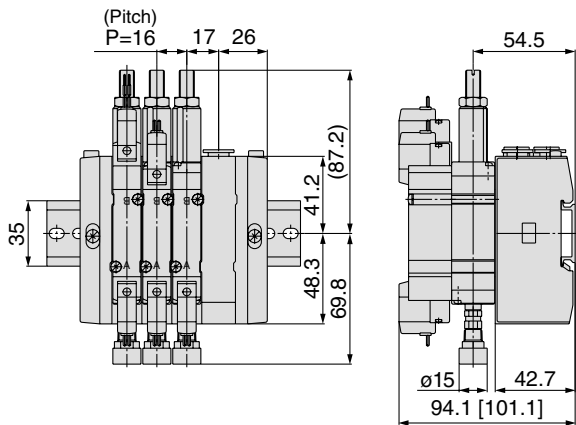
SS5Y5-45- Stations D- C4, N3
C6, N7
C8, N9

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



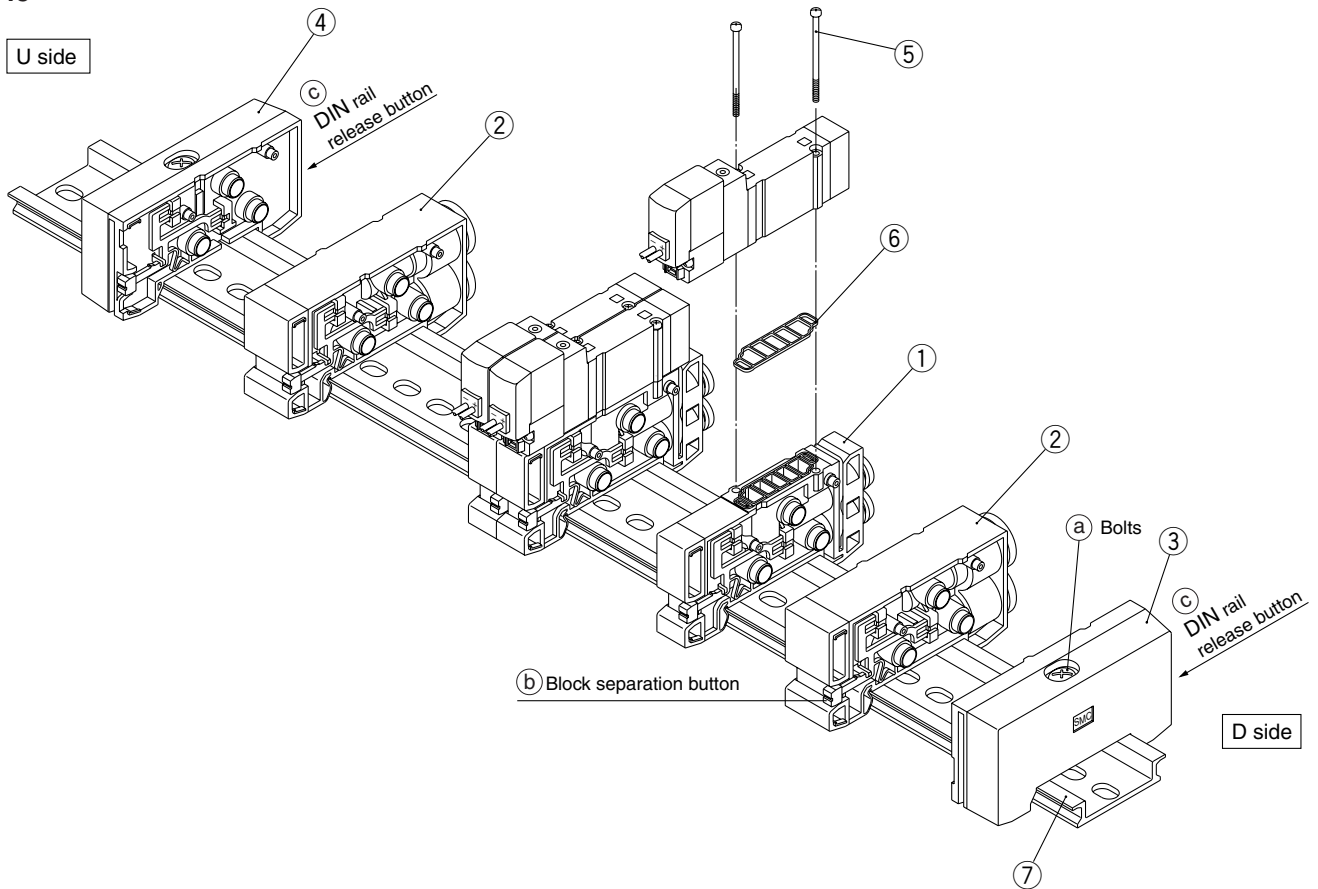
| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 110.5 | 135.5 | 148 | 160.5 | 173 | 198 | 210.5 | 223 | 235.5 |
| L2 | 100 | 125 | 137.5 | 150 | 162.5 | 187.5 | 200 | 212.5 |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

With interface regulator (with gauge)



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) 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" 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.

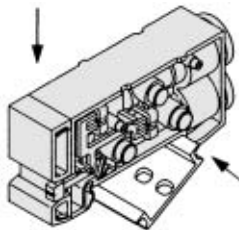
- 1 Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons (c), at two locations, separate the manifold base from the DIN rail.)
- 2 Press manifold block assembly dividing button (b), that are at the location where manifold bases are to be added, 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.

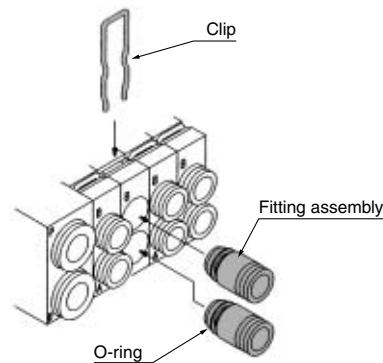
Note 2) When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate. Before supplying air, confirm that there are no gaps, etc. between blocks, and that manifold blocks are securely fastened to the DIN rail. Then supply air and confirm that there is no air leakage before operating.

Fig. (1) Block mounting procedure



Hook the DIN rail here and press down in the direction of the arrow until a click sound is heard.

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 $\phi 4$ | VVQ1000-50A-C4 |
| | One-touch fitting for $\phi 6$ | VVQ1000-50A-C6 |
| SY5000 | One-touch fitting for $\phi 4$ | VVQ1000-51A-C4 |
| | One-touch fitting for $\phi 6$ | VVQ1000-51A-C6 |
| | One-touch fitting for $\phi 8$ | VVQ1000-51A-C8 |

Inch size

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

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 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 | |

One-touch fitting (Inch size)

| Symbol | Port size | Applicable series |
|-----------|--------------------------------------------------------|-------------------|
| N3 | One-touch fitting for ø ⁹ / ₃₂ " | SY3000 |
| N7 | One-touch fitting for ø ¹ / ₄ " | |
| M | Mixed | SY5000 |
| N3 | One-touch fitting for ø ⁹ / ₃₂ " | |
| N7 | One-touch fitting for ø ¹ / ₄ " | |
| N9 | One-touch fitting for ø ⁵ / ₃₂ " | |
| M | Mixed | |

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

Option

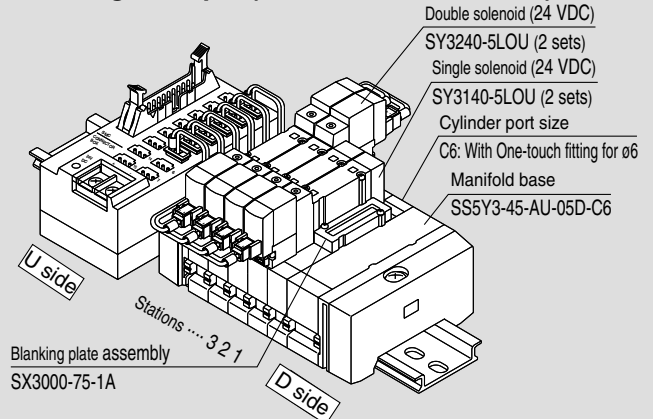
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (Max. 20 stations)



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.

SS5Y₃-45-A_U-□□-□-□□ 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 |

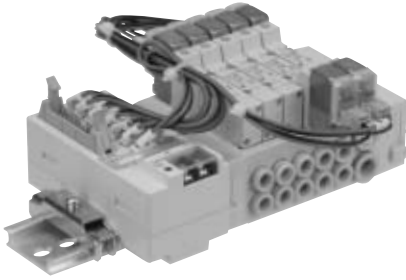
Manual override

| | |
|------------|--------------------------------|
| 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 | |
| Port size | P, R port | C8 (One-touch fitting for ø8) | C10 (One-touch fitting for ø10) |
| | A, B port | C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) | C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8) |
| Manifold base weight W (g) n: Stations | 2 to 10 stations: W = 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".

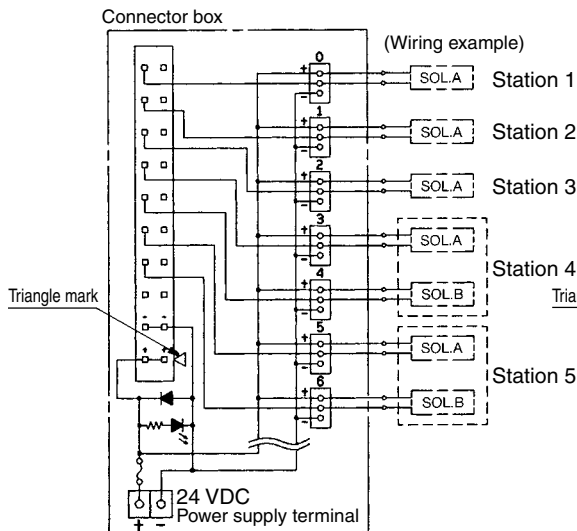
Flow Characteristics

| 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 |

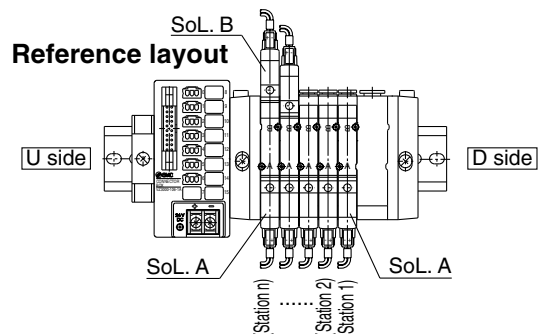
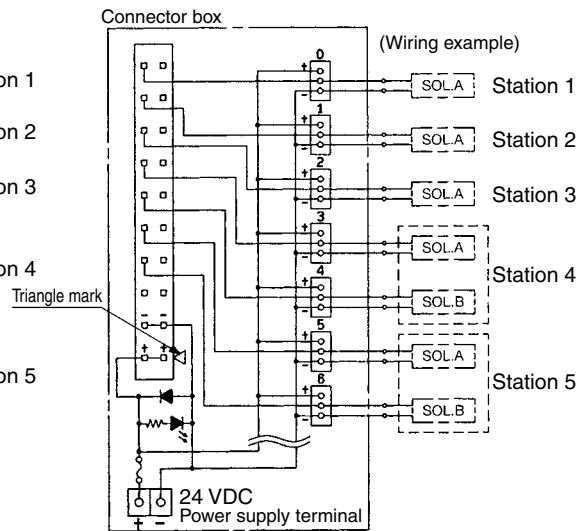
Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Manifold Wiring Diagram (Circuit diagram for the reference layout)

+COM electric circuit diagram



-COM electric circuit diagram

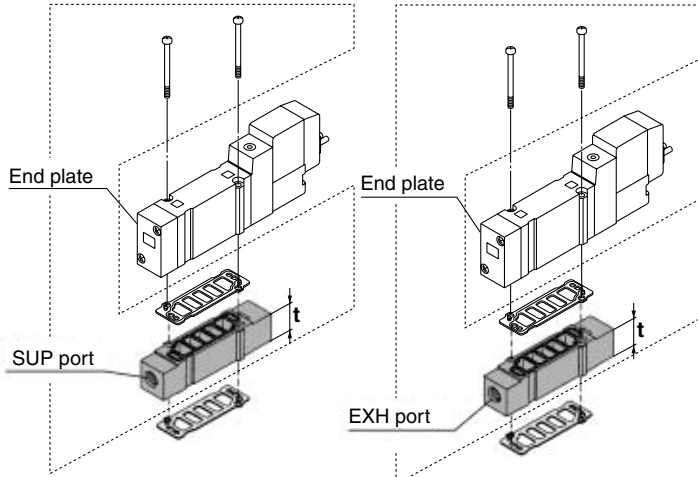


- Connector box for +COM allows transmission until G71-OD16, manufactured by OMRON Corp., to be connected directly for serial transmission. Additionally, it can also be used for the PC wiring system.
- When an external power source must be supplied to the manifold, correct polarity must be observed, 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.

SV
 SZ
 SY
 SYJ
 SX

Manifold Option

Individual SUP spacer assembly ■ Individual EXH spacer assembly



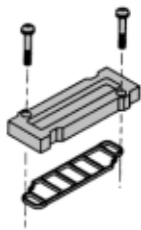
| Series | Assembly part no. | Port size | t |
|--------|-------------------|-----------|----|
| SY3000 | SY3000-38-2A | M5 x 0.8 | 11 |
| SY5000 | SY5000-38-16*A | 1/8" | 15 |

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.)

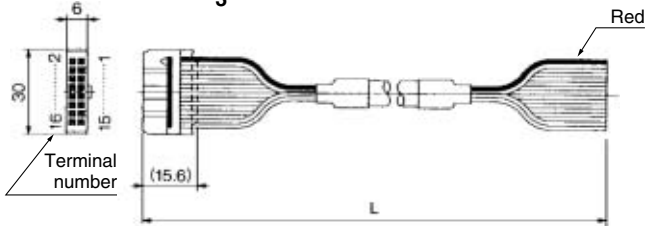
Blanking plate assembly



| Series | Assembly part no. |
|--------|-------------------|
| SY3000 | SX3000-75-1A |
| SY5000 | SX5000-76-5A |

Cable assembly

AXT100-FC20- $\frac{1}{3}$



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

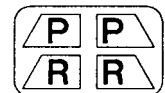
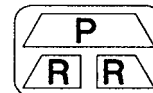
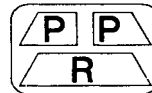
The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

Label for SUP block disk

Label for EXH block disk

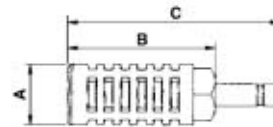
Label for SUP/EXH block disk



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

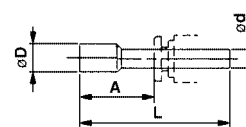
The silencer plugs directly into the One-touch fittings of the manifold.



| 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 with 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

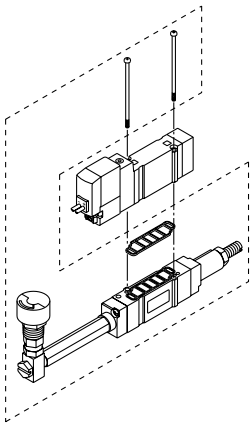
SZ

SY

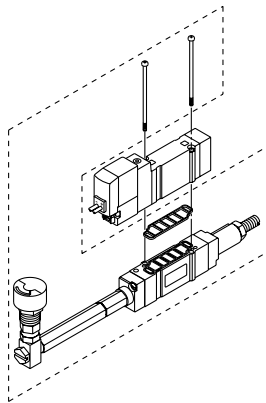
SYJ

SX

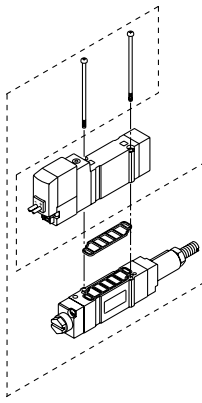
ARBY3000-05-□-2
(For odd number stations)



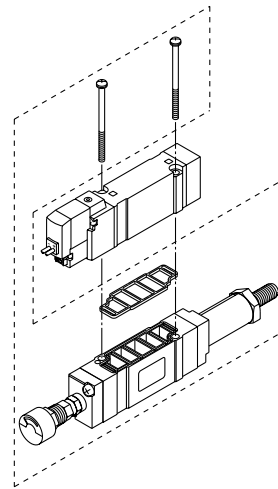
ARBY3000-06-□-2
(For even number stations)



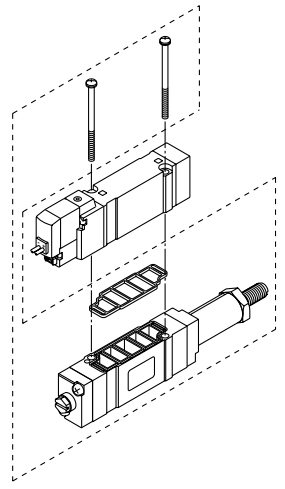
ARBY3000-M1-□-2



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

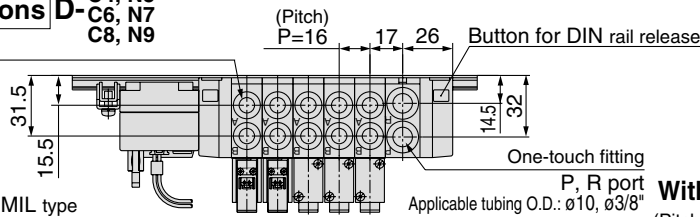
M2: 0.16 N·m

M3: 0.8 N·m

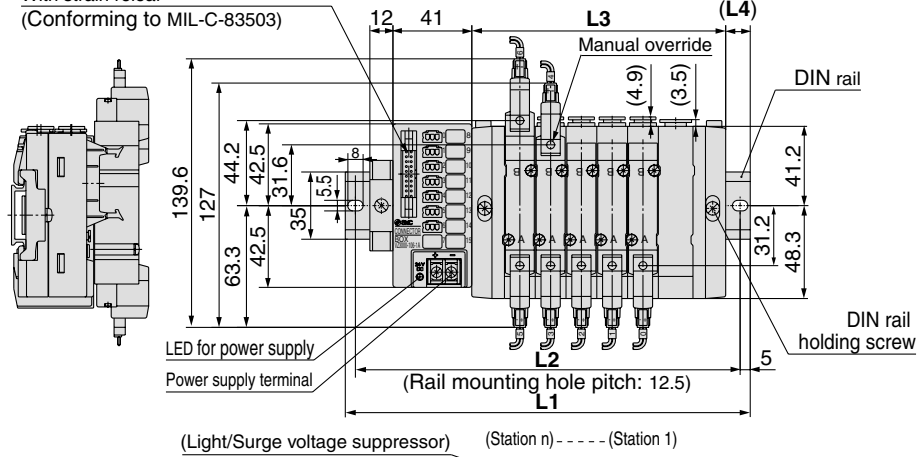
Dimensions: Series SY5000

SS5Y5-45-AU- Stations D- C4, N3 C6, N7 C8, N9

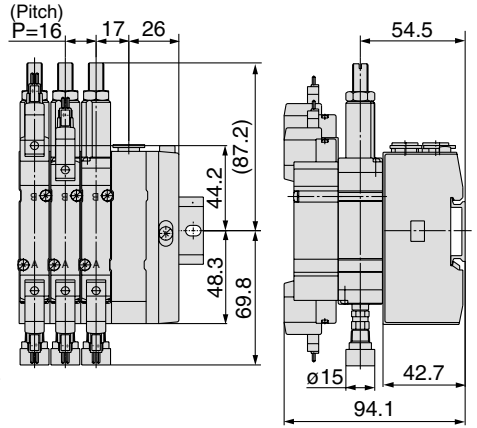
One-touch fitting (A, B port)
Applicable tubing O.D.: $\phi 4, \phi 5/32''$
 $\phi 6, \phi 1/4''$
 $\phi 8, \phi 5/16''$



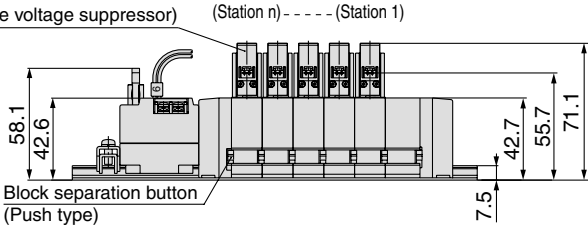
Applicable connector: 20 pins MIL type
With strain relief
(Conforming to MIL-C-83503)



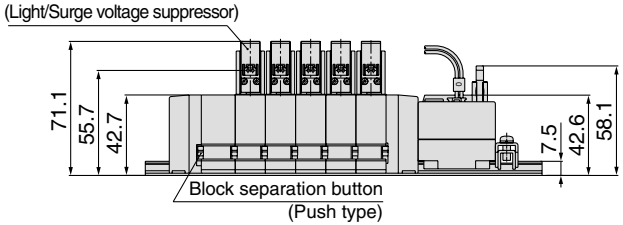
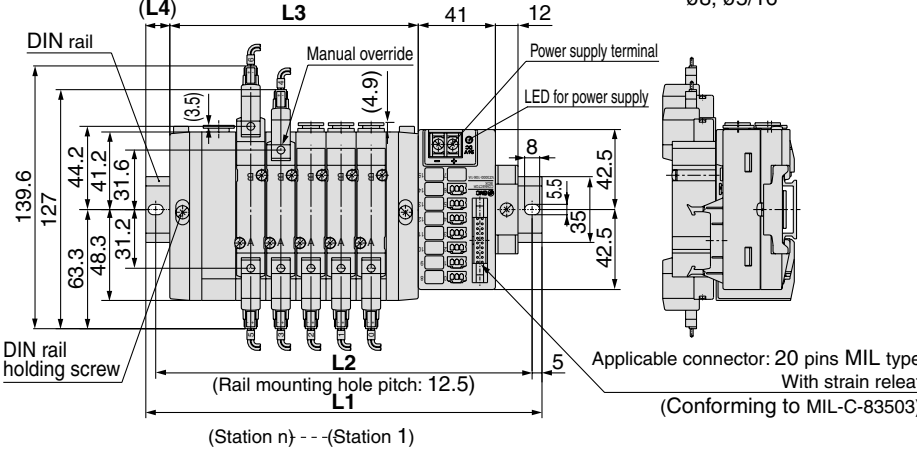
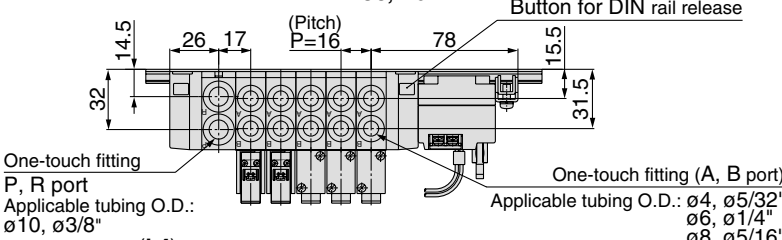
With interface regulator (with gauge)



- SV
- SZ
- SY**
- SYJ
- SX



SS5Y5-45-AD- Stations U- C4, N3 C6, N7 C8, N9

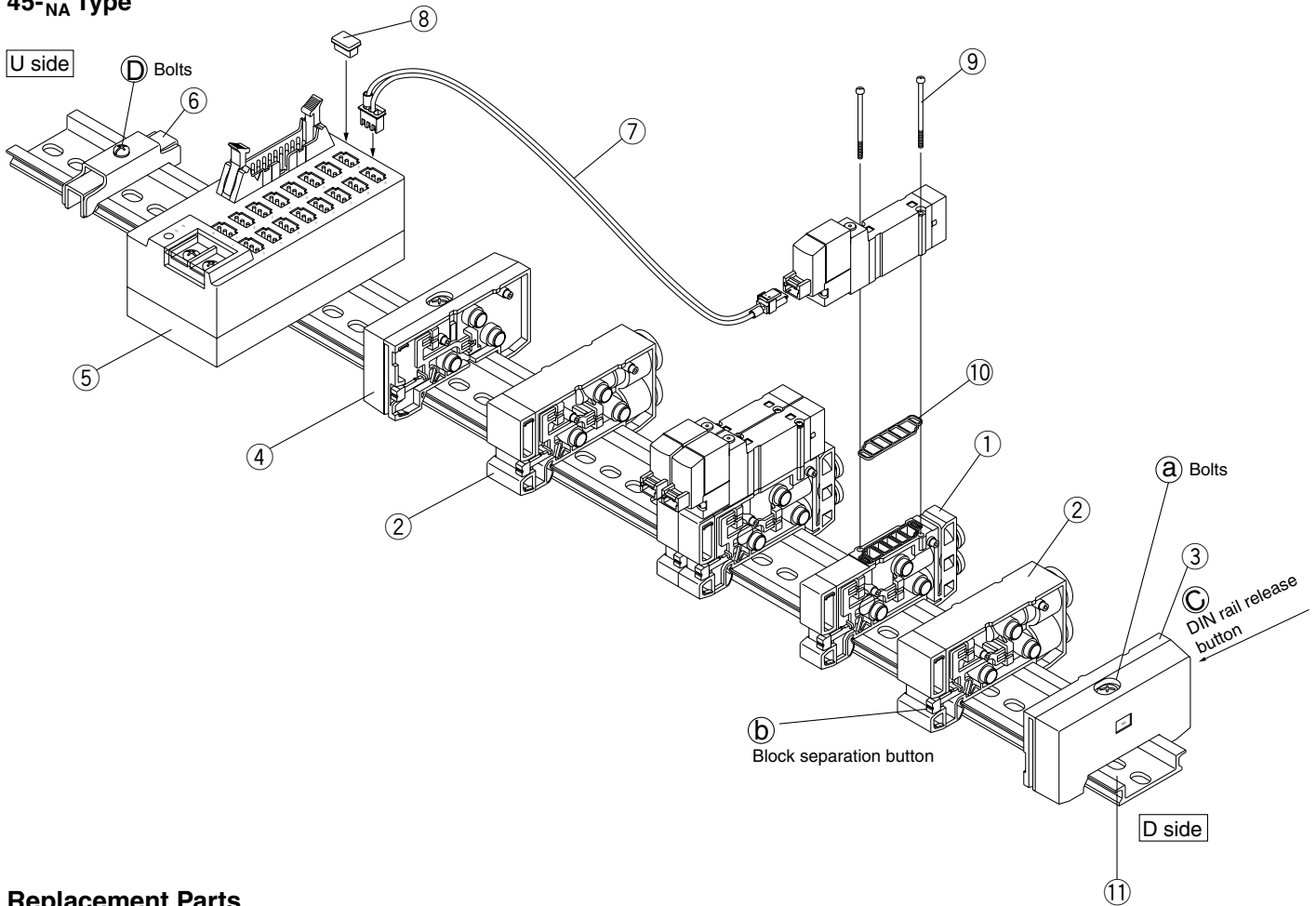


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 160.5 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 273 | 298 | 323 | 348 | 360.5 | 373 | 398 | 410.5 |
| L2 | 150 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 262.5 | 287.5 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 |
| L3 | 84 | 100 | 116 | 132 | 148 | 164 | 180 | 196 | 212 | 246 | 262 | 278 | 294 | 310 | 326 |
| L4 | 11.5 | 16 | 14.5 | 12.5 | 17 | 15.5 | 13.5 | 12 | 16.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 |

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

DIN Rail Manifold Exploded View

45-A_{NA} Type



Replacement Parts

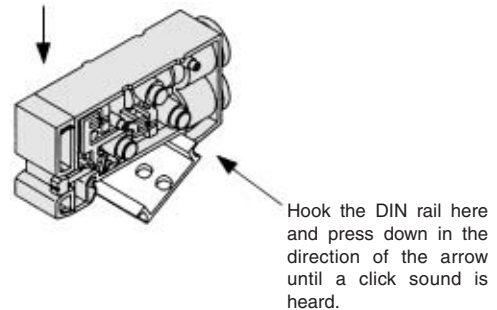
| No. | Description | Part no. | | Note |
|-----|------------------------------|---------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 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



SV

SZ

SY

SYJ

SX

⚠ 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.

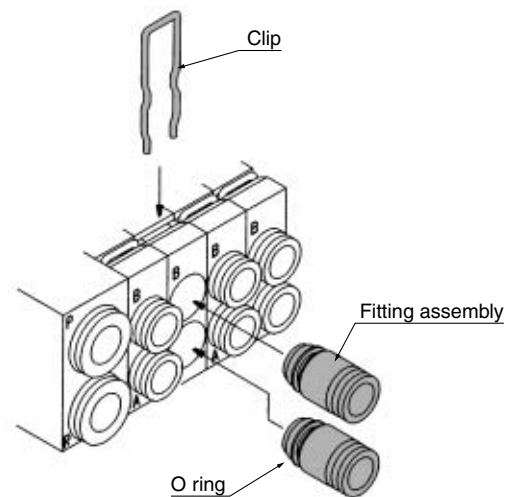
Metric size

| | | |
|--------|--------------------------------|----------------|
| SY3000 | One-touch fitting for $\phi 4$ | VVQ1000-50A-C4 |
| | One-touch fitting for $\phi 6$ | VVQ1000-50A-C6 |
| SY5000 | One-touch fitting for $\phi 4$ | VVQ1000-51A-C4 |
| | One-touch fitting for $\phi 6$ | VVQ1000-51A-C6 |
| | One-touch fitting for $\phi 8$ | VVQ1000-51A-C8 |

Inch size

| | | |
|--------|-------------------------------------|----------------|
| SY3000 | One-touch fitting for $\phi 5/32$ " | VVQ1000-50A-N3 |
| | One-touch fitting for $\phi 1/4$ " | VVQ1000-50A-N7 |
| SY5000 | One-touch fitting for $\phi 5/32$ " | VVQ1000-51A-N3 |
| | One-touch fitting for $\phi 1/4$ " | VVQ1000-51A-N7 |
| | One-touch fitting for $\phi 5/16$ " | 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 wiring 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 $\phi 4$ | 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 $\phi 5/16$ " | |
| M | Mixed | |

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

Voltage

| | |
|-----|--------|
| Nil | 24 VDC |
| 12V | 12 VDC |

Option

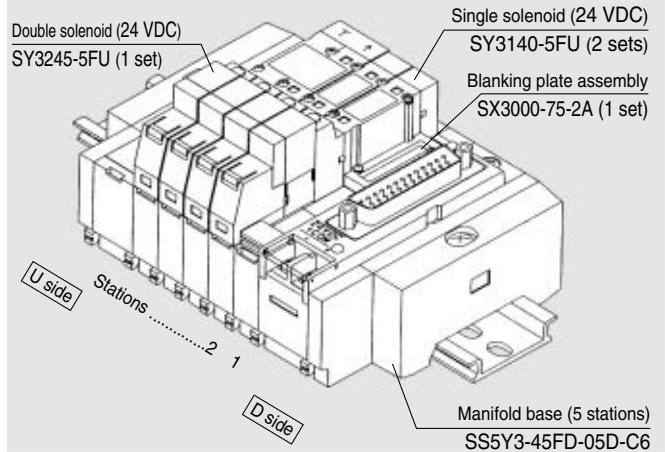
When a longer DIN rail is desired than the specified stations, specify the station number to be required.
(20 stations at maximum)



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 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 " | |
| M | Mixed | |

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 | |

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

Voltage

| | |
|-----|--------|
| Nil | 24 VDC |
| 12V | 12 VDC |

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

SV
SZ
SY
SYJ
SX

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 | |

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 | |

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 | |

Option
When a longer DIN rail is desired than the specified stations, specify the station number to be required.

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

* For special specifications, indicate separately by 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 | |

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 | |

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 | |

Option
When a longer DIN rail is desired than the specified stations, specify the station number to be required.

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

* For special specifications, indicate separately by 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 |

Option

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

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 | SY5000 |
| C4 | One-touch fitting for ø4 | |
| 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 | SY5000 |
| N3 | One-touch fitting for ø5/32" | |
| 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.

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.

SUP/EXH block assembly specifications

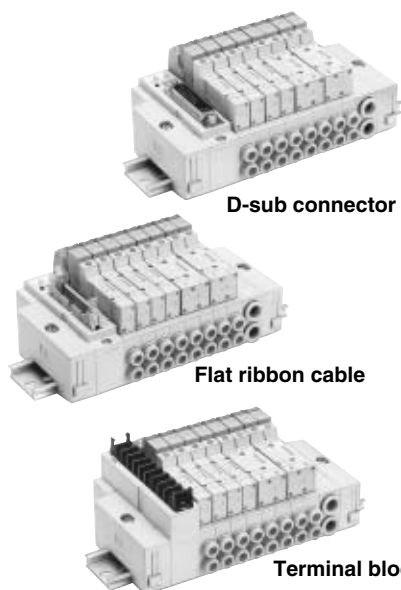
| Symbol | Specifications |
|--------|----------------------------------|
| Nil | Internal pilot |
| R | External pilot |
| S | Internal pilot/Built-in silencer |
| RS | External pilot/Built-in silencer |

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 ^{Note 1, 2)} | 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) | |
| | | 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) | |
| | A, B port | SY3000 C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)/C8 (One-touch fitting for ø8) | | | | | SY5000 C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)/C8 (One-touch fitting for ø8) | |
| | | 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. | | | |
| Manifold base weight w (g) | SY3000 | 2 to 10 stations: W = 26n + 172 11 to 20 stations: W = 26n + 199 | | | | | | |
| n: Stations (D-sub connector) | 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".

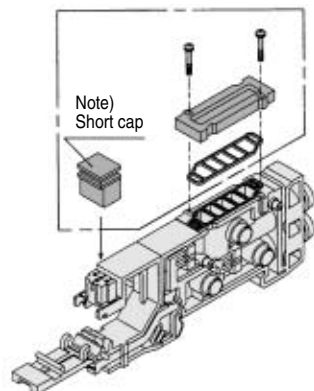
Flow Characteristics

| 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 (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

■ Blanking plate assembly



| Series | Assembly part no. |
|--------|-------------------|
| SY3000 | SX3000-75-2A |
| SY5000 | SX5000-76-6A |

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.)

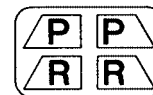
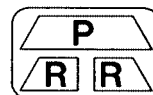
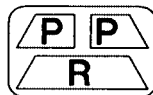


| Series | Part no. |
|--------|--------------|
| SY3000 | SX3000-77-1A |
| SY5000 | SX5000-77-1A |

■ 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)

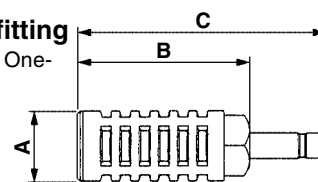
Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



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

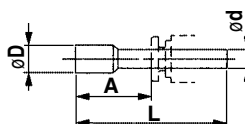
The silencer plugs directly into the One-touch fittings of the manifold.



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

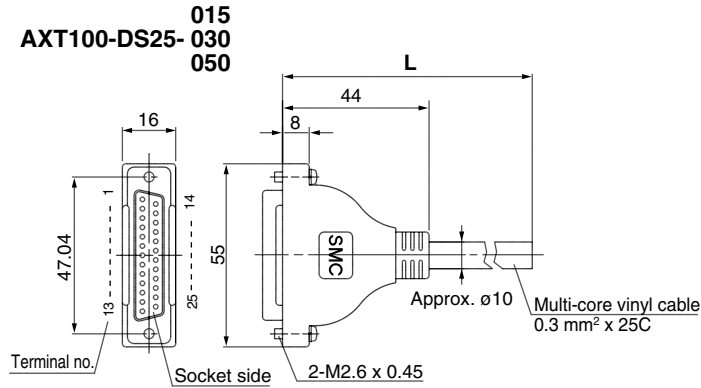
⚠ Caution

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

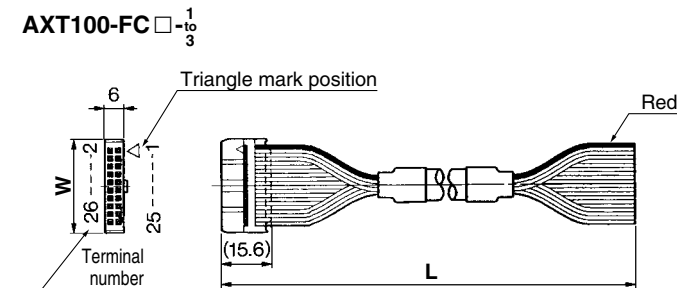
| Item | Characteristics |
|-------------------------------------|-----------------|
| Conductor resistance Ω/km, 20°C | 65 or less |
| Voltage limit V, 1 min, AC | 1000 |
| Insulation resistance MΩkm, 20°C | 5 or more |

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



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

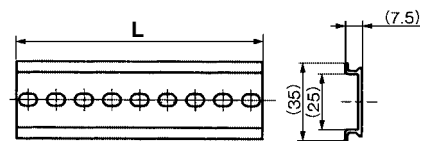
- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ 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.



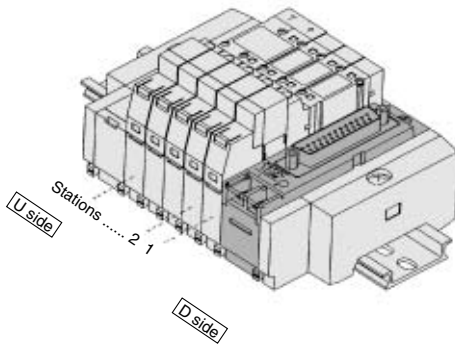
| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L Dimension | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 |
| No. | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 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

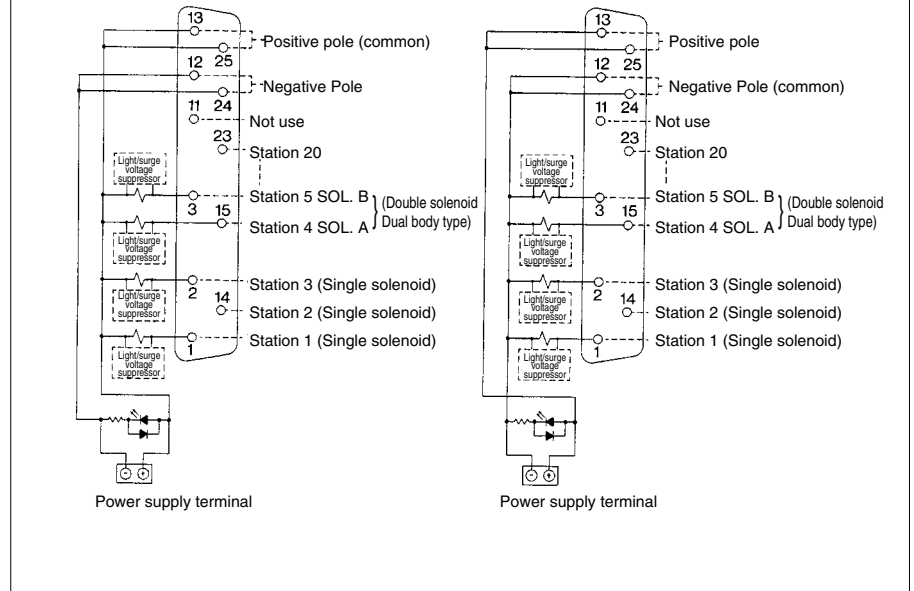
Type 45(N)F: D-sub Connector

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)>

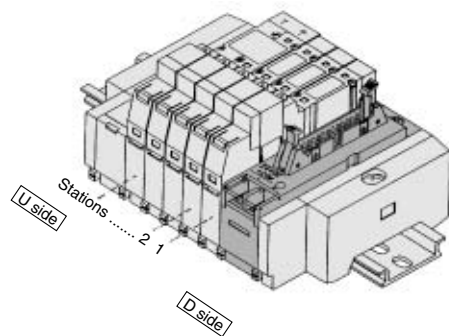


- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 20 manifold stations, with up to 22 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted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

SV
 SZ
 SY
 SYJ
 SX

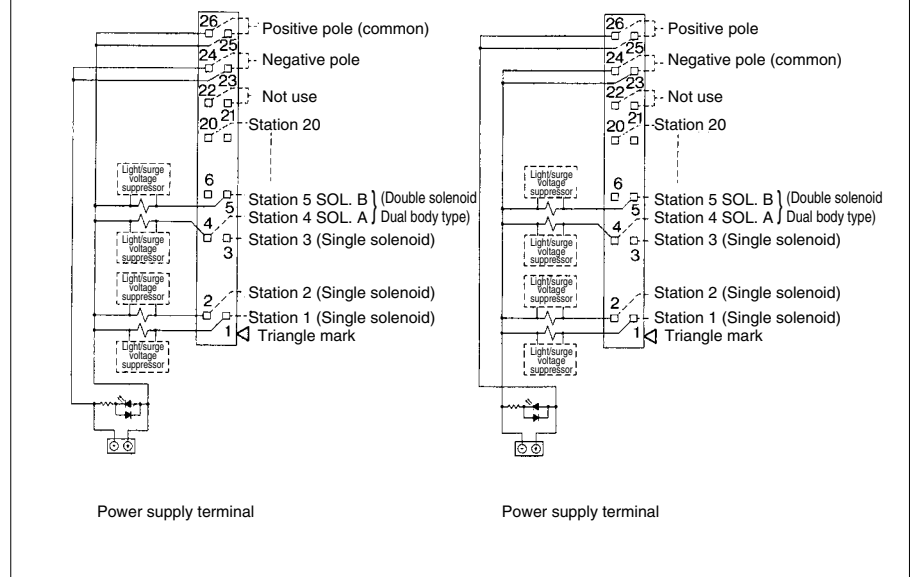
Type 45(N)P: Flat Ribbon Cable (26 pins)

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

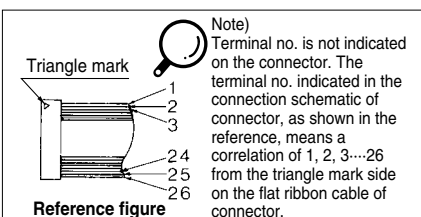


<For positive common (45P)>

<For negative common (45NP)>



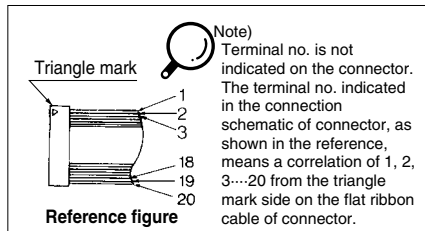
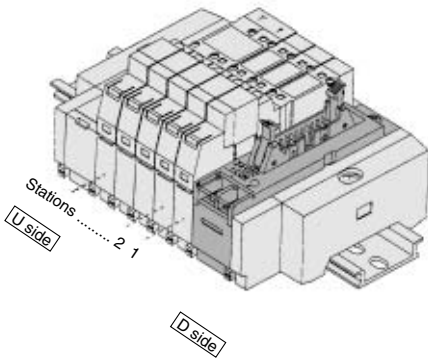
- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 20 manifold stations, with up to 20 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted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



Manifold Internal Wiring

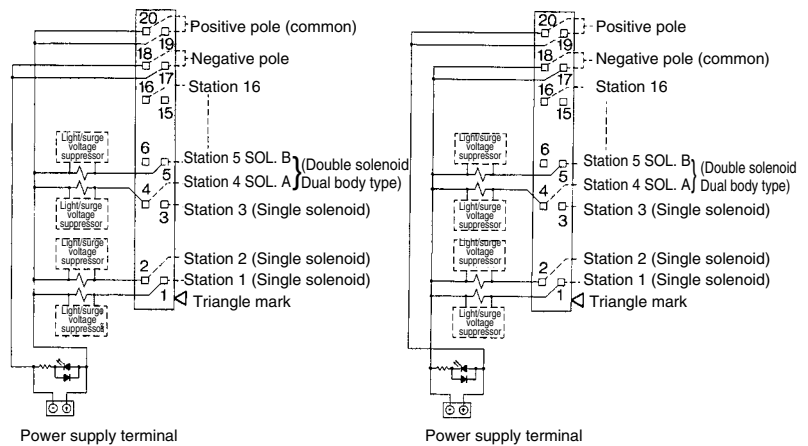
Type 45(N)PG: Flat Ribbon Cable (20 pins)

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)>

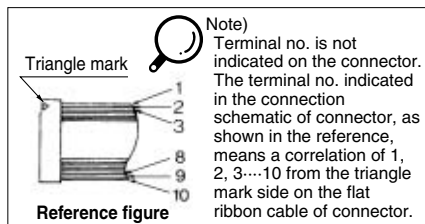
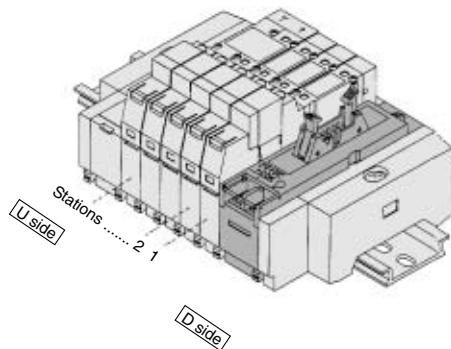
<For negative common (45NPG)>



- 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.

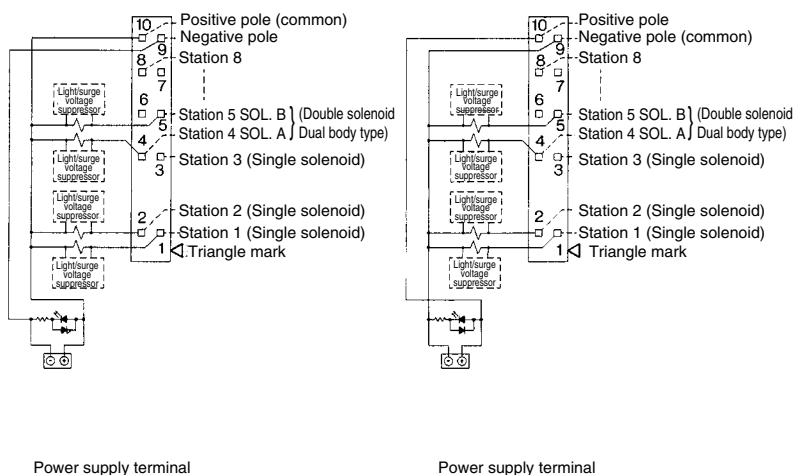
Type 45(N)PH: Flat Ribbon Cable (10 pins)

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)>

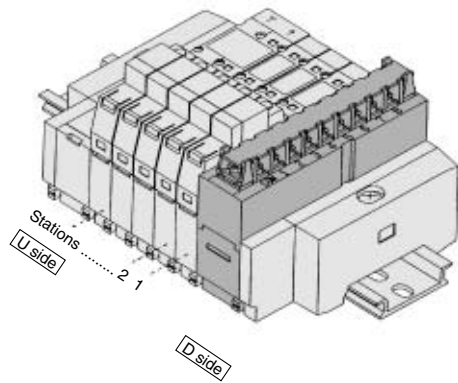


- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 8 manifold stations, with up to 8 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted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

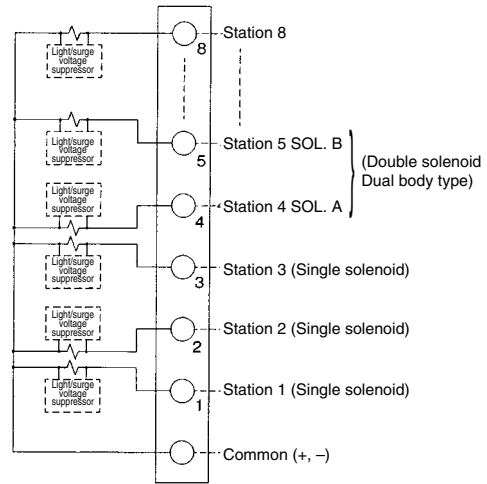
Manifold Internal Wiring

Type 45T: Terminal Block

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



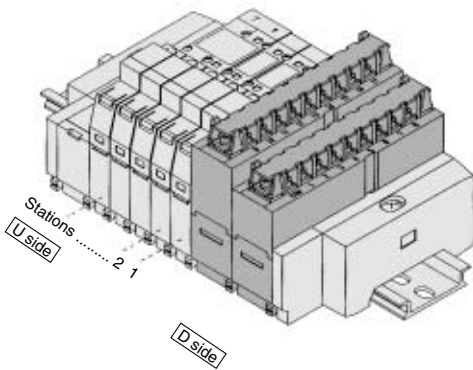
(45T)



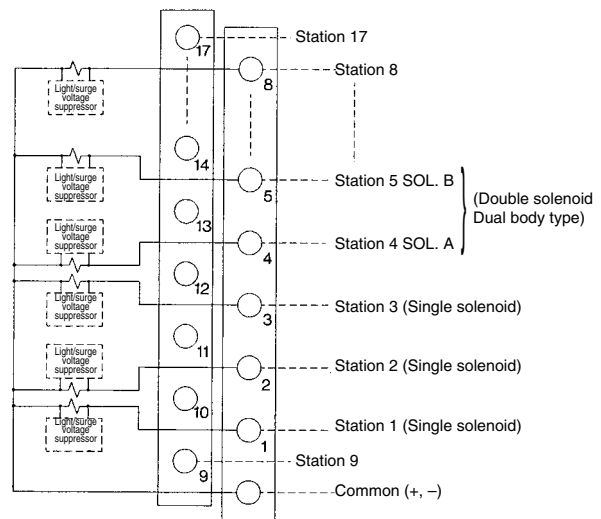
- SV
- SZ
- SY
- SYJ
- SX

- 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)

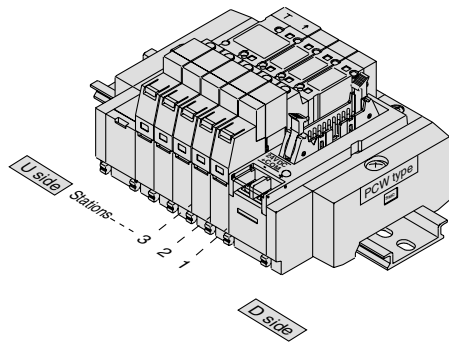


- The maximum number of stations that can be accommodated is 17 manifold stations, with up to 17 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
- There is no polarity in the COM wiring. Supply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

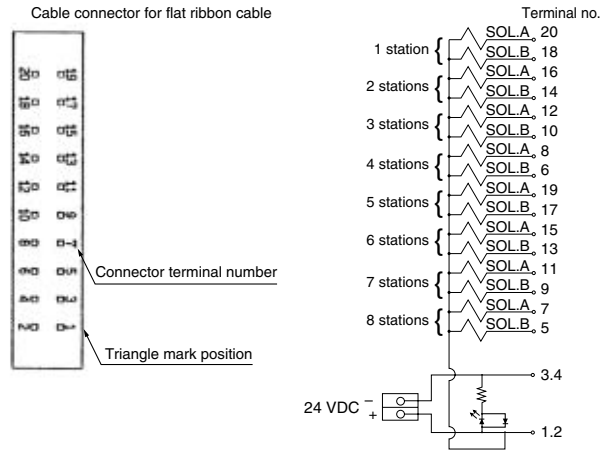
Manifold Internal Wiring

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.)



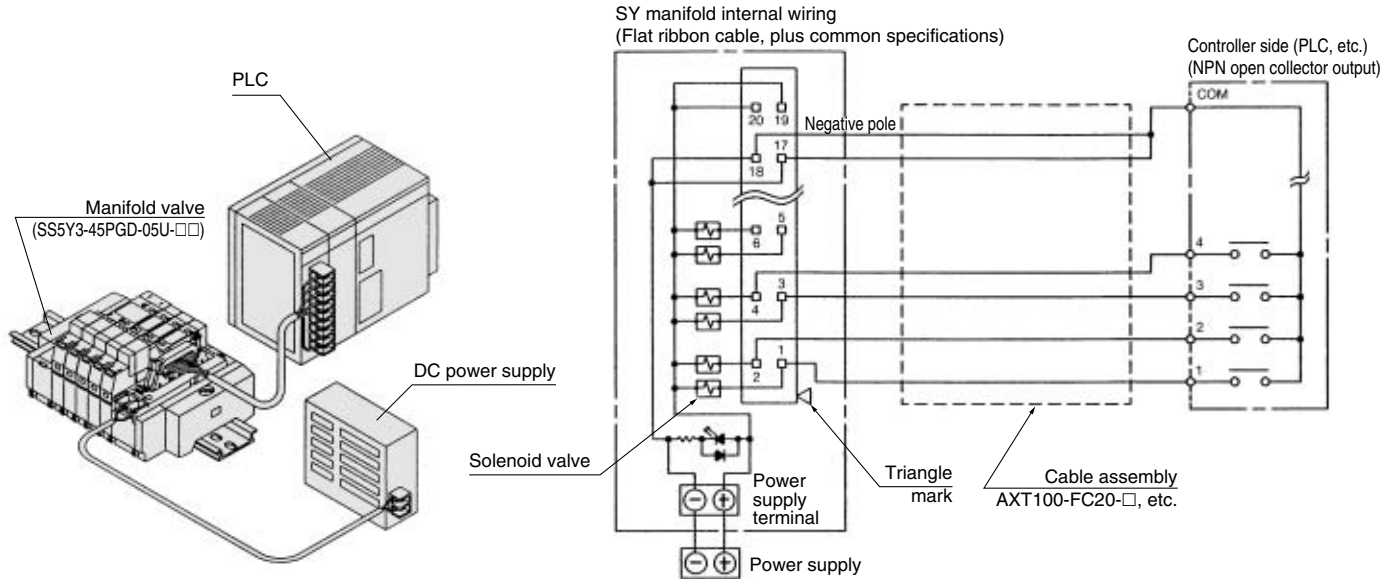
- The maximum number of stations that can be accommodated is 16 manifold stations, with up to 16 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

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

How to Connect SS5Y□-45□ (Plug-in)

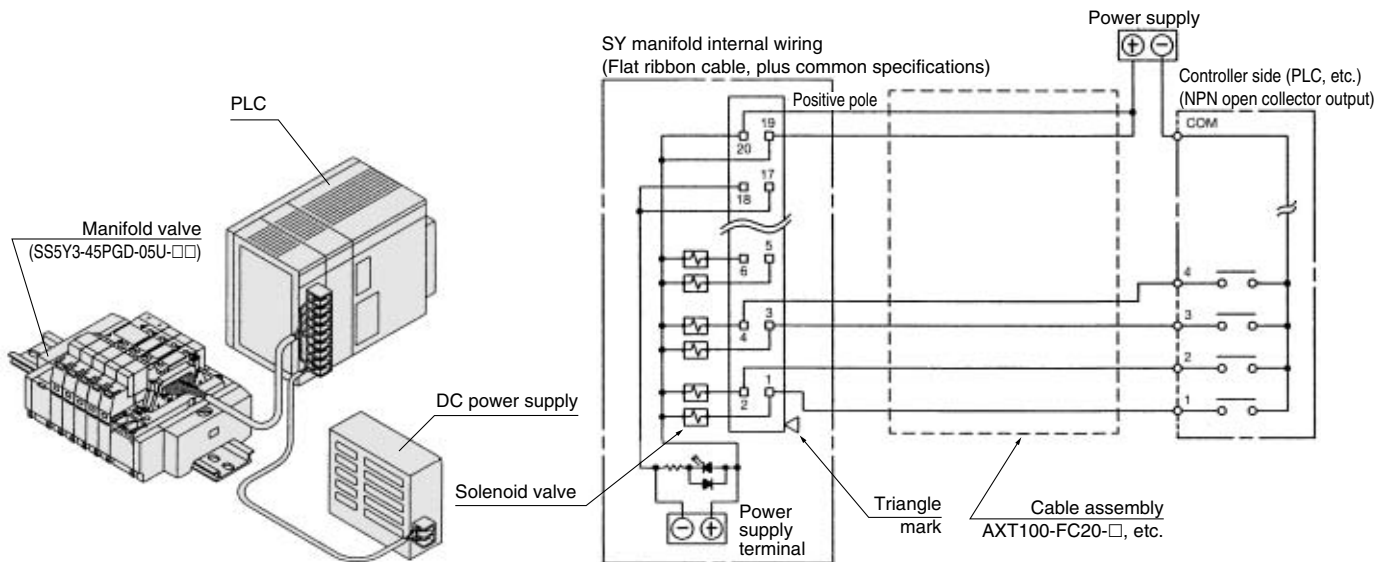
Power terminal is equipped with plug-in manifold of Series SY as standard.
 Power terminal enables the power supply to valve from either of manifold or controller side.

1. Wiring example when using manifold power supply terminals



SV
 SZ
SY
 SYJ
 SX

2. Wiring example when not using manifold power supply terminals (Power is supplied to the controller side or along the wiring, etc.)

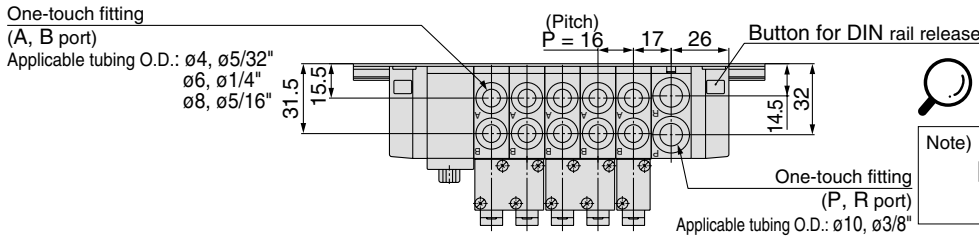


⚠ Caution

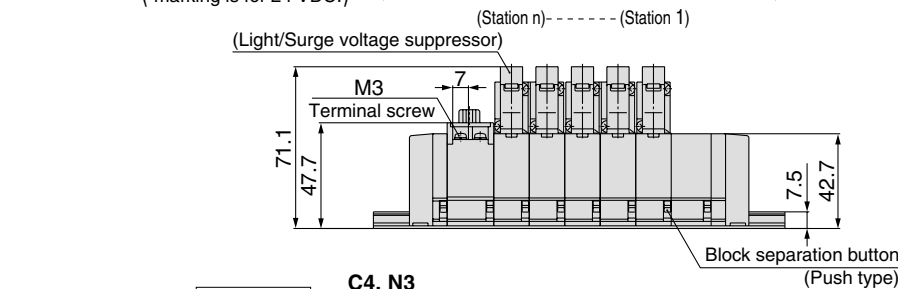
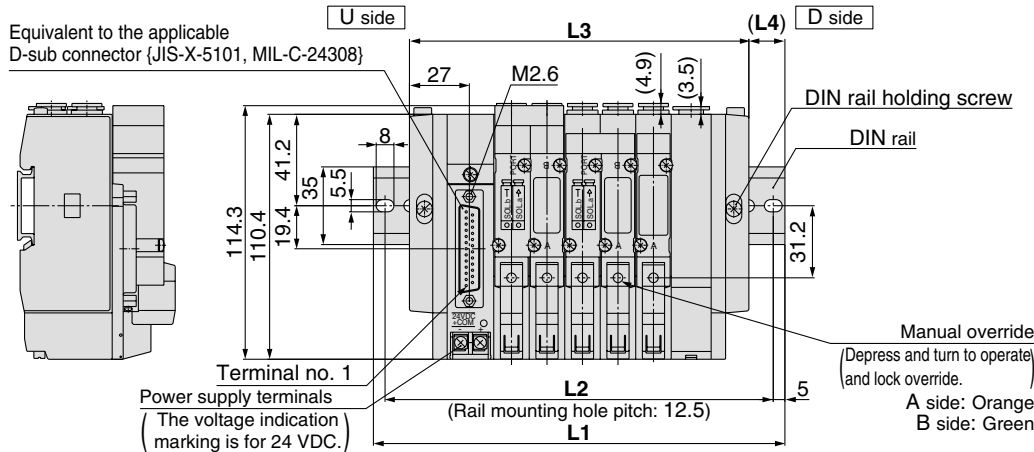
- Single wire, COM position, etc. of PLC are different from each manufacturer. When connecting with PLC, read the specifications carefully and understand the electrical circuit. Poor wiring could cause damage to PLC, power source, etc. as well as manifold and valve.

SY5000: D-sub Connector/Plug-in

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

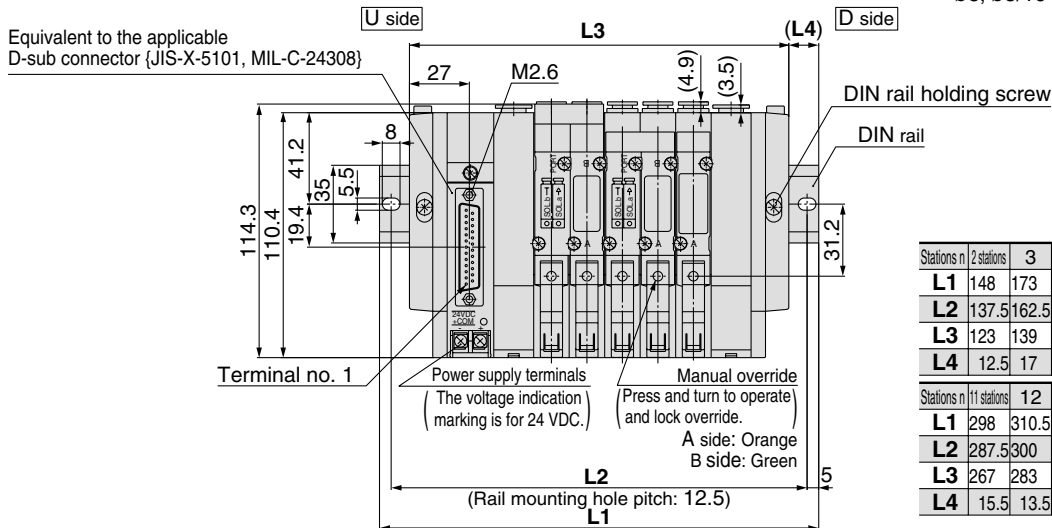
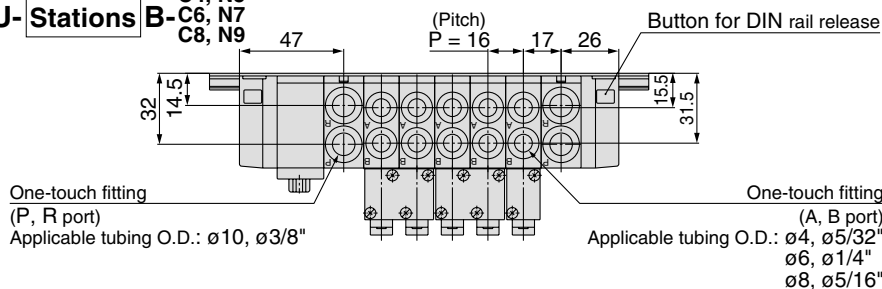


Note) The L1 to L4 dimensions of SS5Y5-45FU- Stations U-C4, N3, C6, N7, C8, N9 are identical to those of SS5Y5-45FU- Stations D-C4, N3, C6, N7, C8, N9.



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

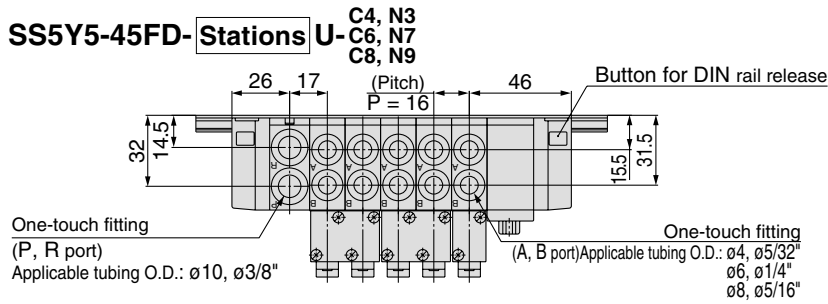
SS5Y5-45FU- Stations B-C6, N7
C4, N3
C8, N9



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

| Stations n | 11 stations | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 stations |
|------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

SY5000: D-sub Connector/Plug-in



Note) The L1 to L4 dimensions of SS5Y5-45FD- Stations D- C4, N3
C6, N7
C8, N9 are identical to those of SS5Y5-45FD- Stations U- C4, N3
C6, N7
C8, N9

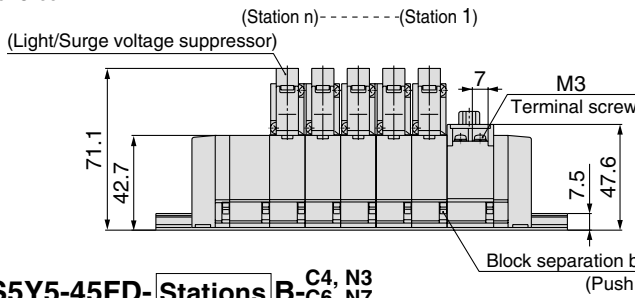
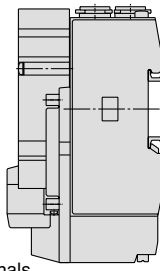
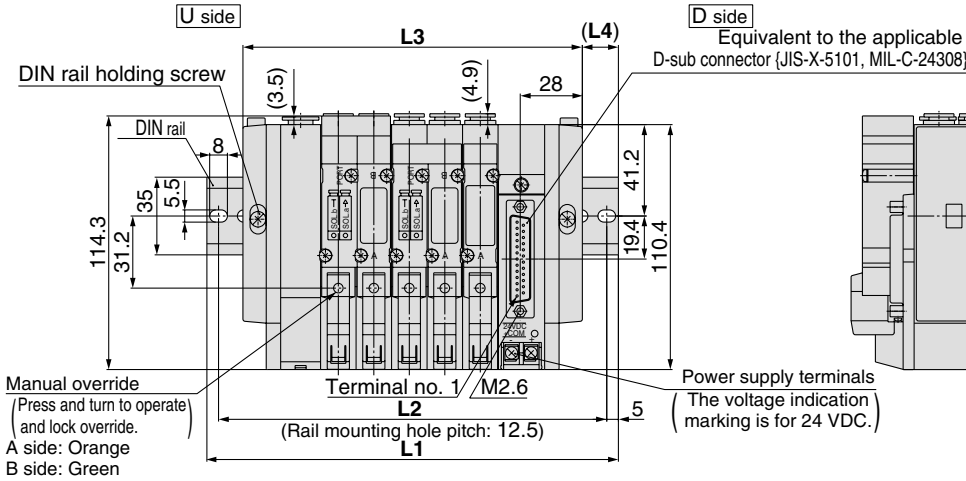
SV

SZ

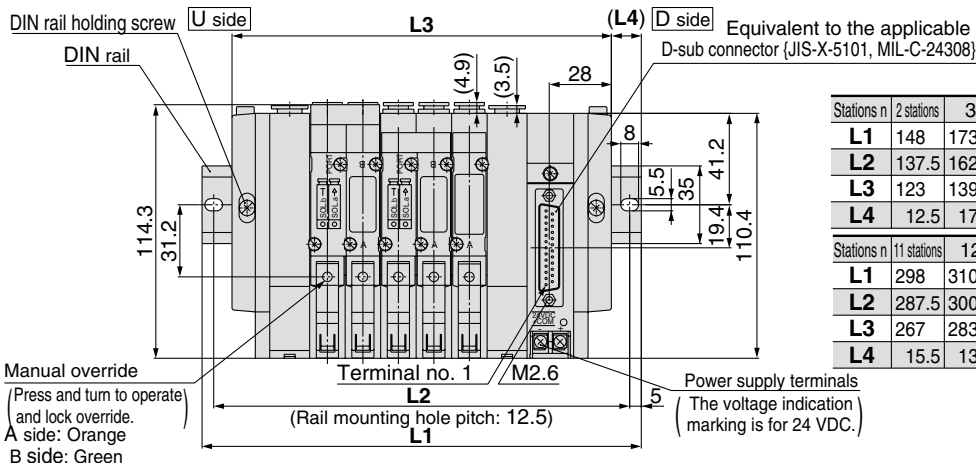
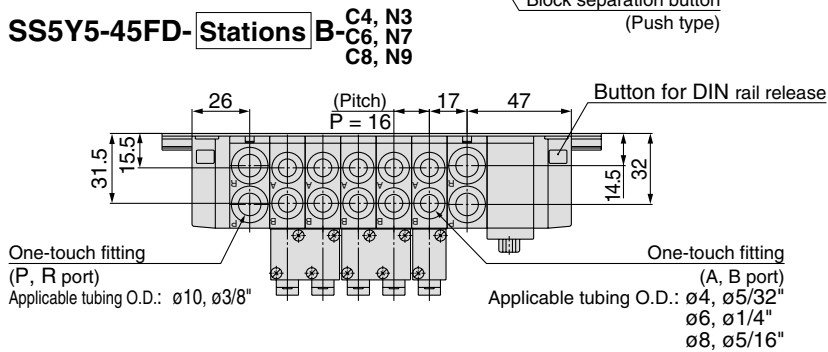
SY

SYJ

SX



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

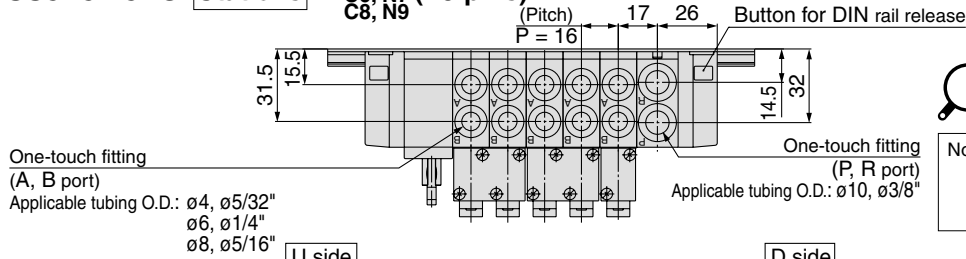


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |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

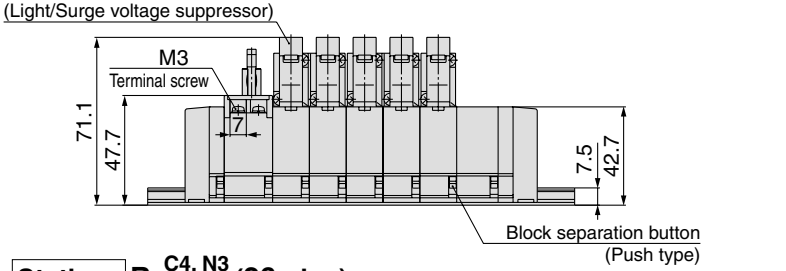
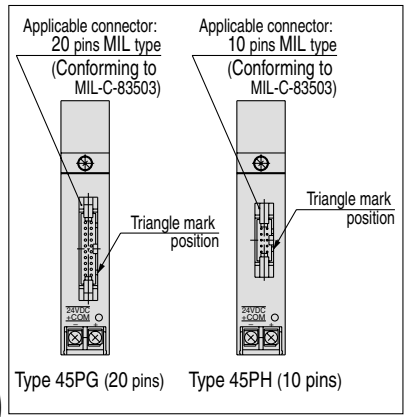
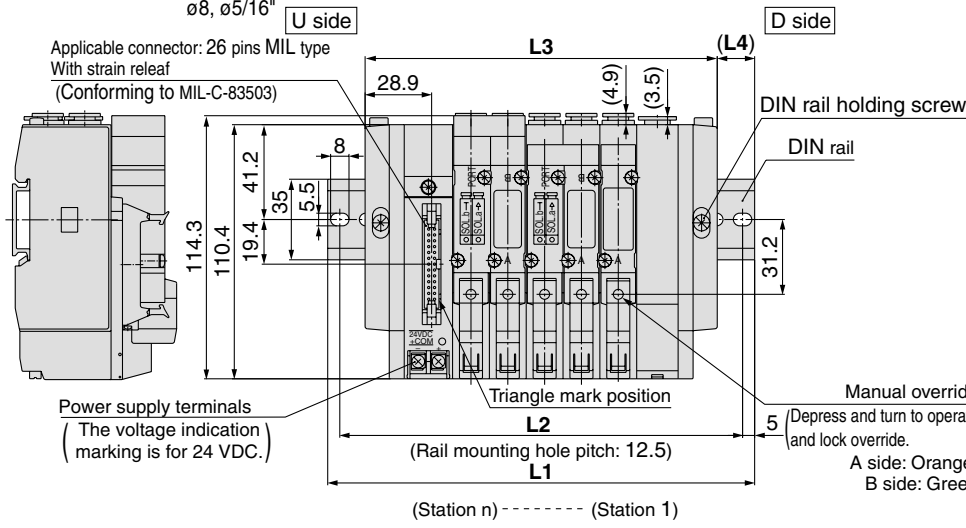
| Stations n | 11 stations | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 stations |
|------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

SY5000: Flat Ribbon Cable/Plug-in

SS5Y5-45PU- Stations D-C4, N3, C6, N7, C8, N9 (26 pins)

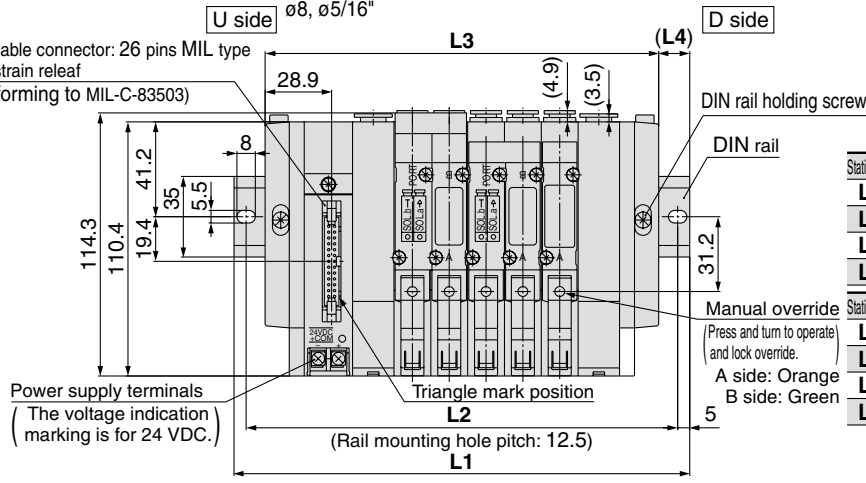
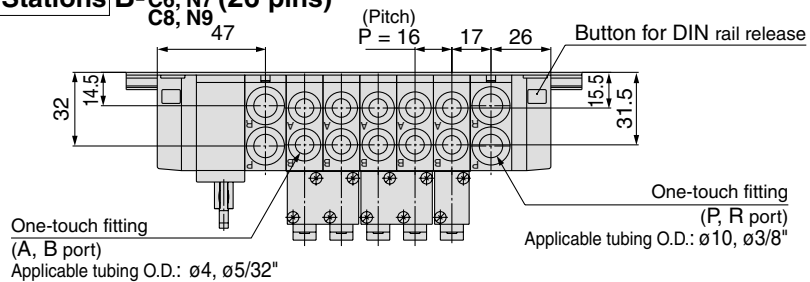


Note) The L1 to L4 dimensions of SS5Y5-45P□U- Stations U-C4, N3, C6, N7, C8, N9 are identical to those of SS5Y5-45P□U- Stations D-C4, N3, C6, N7, C8, N9.



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

SS5Y5-45PU- Stations B-C4, N3, C6, N7, C8, N9 (26 pins)

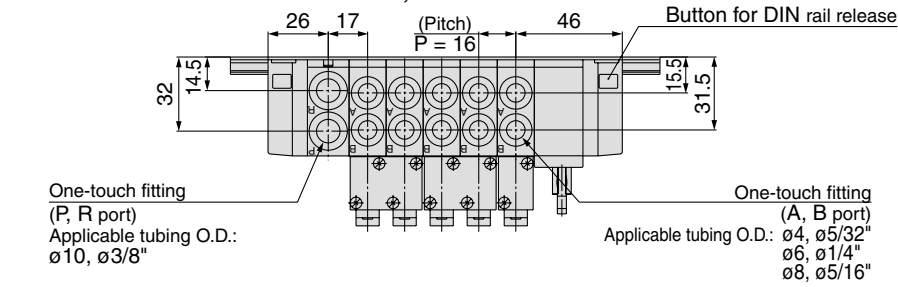


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |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

| Stations n | 11 stations | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 stations |
|------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

SY5000: Flat Ribbon Cable/Plug-in

SS5Y5-45PD- Stations U-C4, N3, C6, N7, C8, N9 (26 pins)



Note) The L1 to L4 dimensions of SS5Y5-45P□D- Stations D-C4, N3, C6, N7, C8, N9 are identical to those of SS5Y3-45P□D- Stations U-C4, N3, C6, N7, C8, N9.

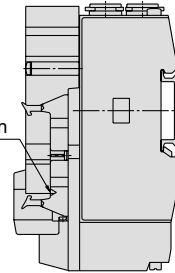
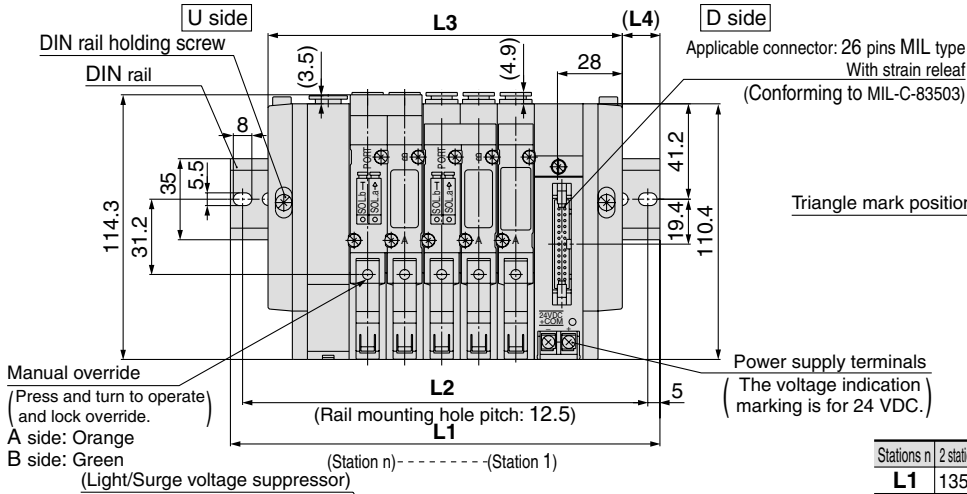
SV

SZ

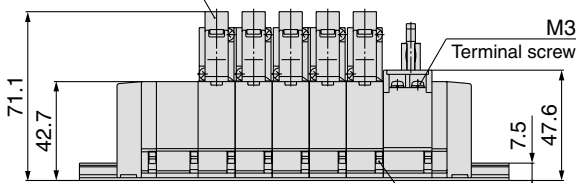
SY

SYJ

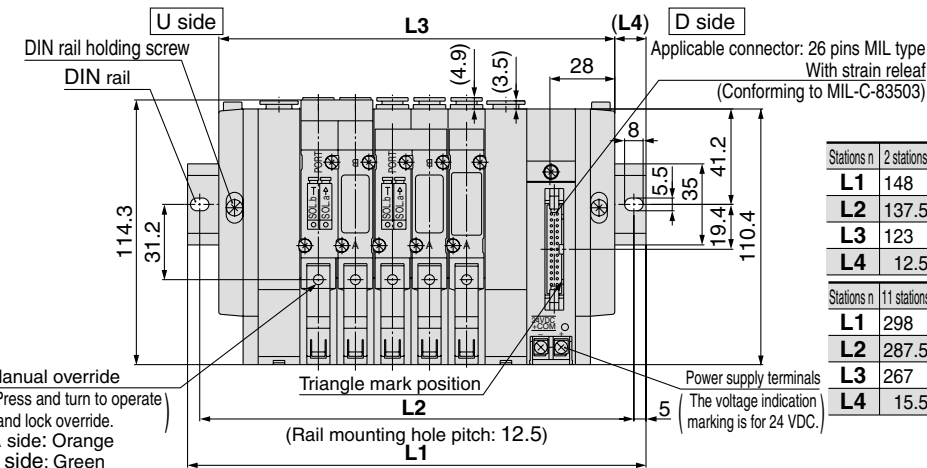
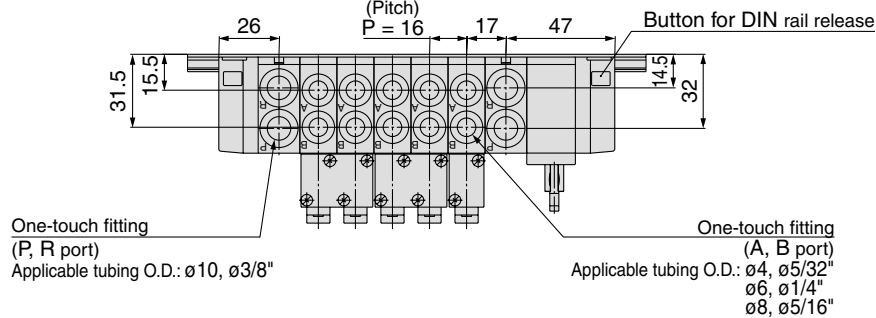
SX



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



SS5Y5-45PD- Stations B-C4, N3, C6, N7, C8, N9 (26 pins)

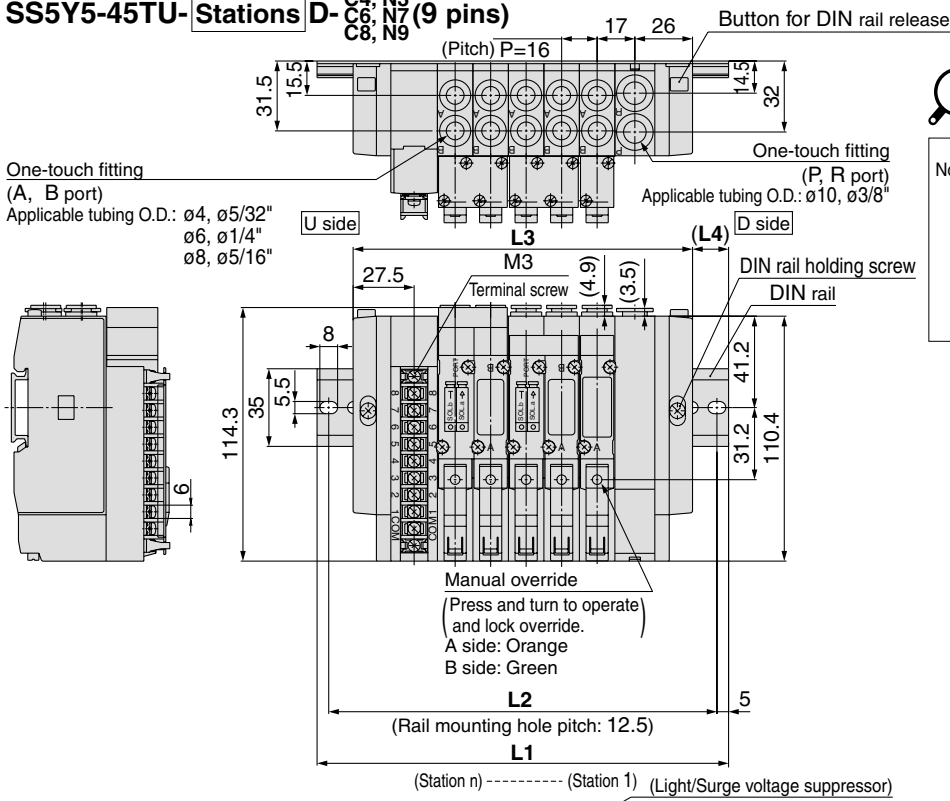


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |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

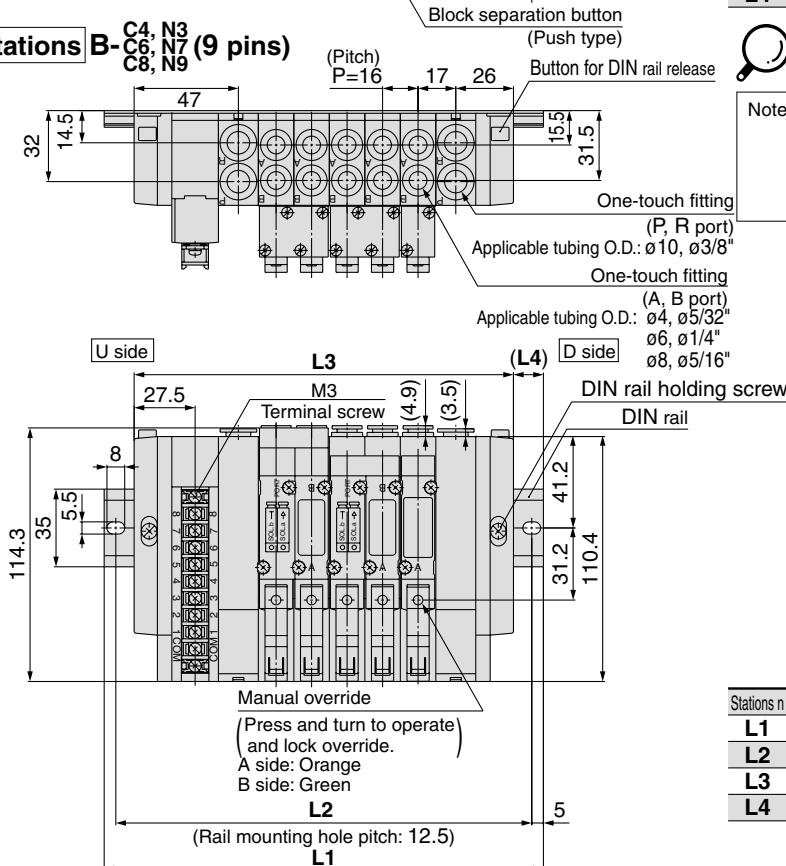
| Stations n | 11 stations | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 stations |
|------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

SY5000: 9 Pins Terminal Block/Plug-in

SS5Y5-45TU- Stations D-C₄, N₃, C₆, N₇, C₈, N₉ (9 pins)



SS5Y5-45TU- Stations B-C₄, N₃, C₆, N₇, C₈, N₉ (9 pins)



Note) The L1 to L4 dimensions of SS5Y5-45TU- Stations U-C₄, N₃, C₆, N₇, C₈, N₉, SS5Y5-45TD- Stations U-C₄, N₃, C₆, N₇, C₈, N₉ are identical those of SS5Y5-45TU- Stations D-C₄, N₃, C₆, N₇, C₈, N₉

| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 stations |
|------------|------------|-------|-------|-------|-------|-------|------------|
| L1 | 135.5 | 148 | 160.5 | 185.5 | 198 | 210.5 | 235.5 |
| L2 | 125 | 137.5 | 150 | 175 | 187.5 | 200 | 225 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 |
| L4 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 |

Note) The L1 to L4 dimensions of SS5Y5-45TD- Stations B-C₄, N₃, C₆, N₇, C₈, N₉ are identical to those of SS5Y5-45TU- Stations B-C₄, N₃, C₆, N₇, C₈, N₉

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

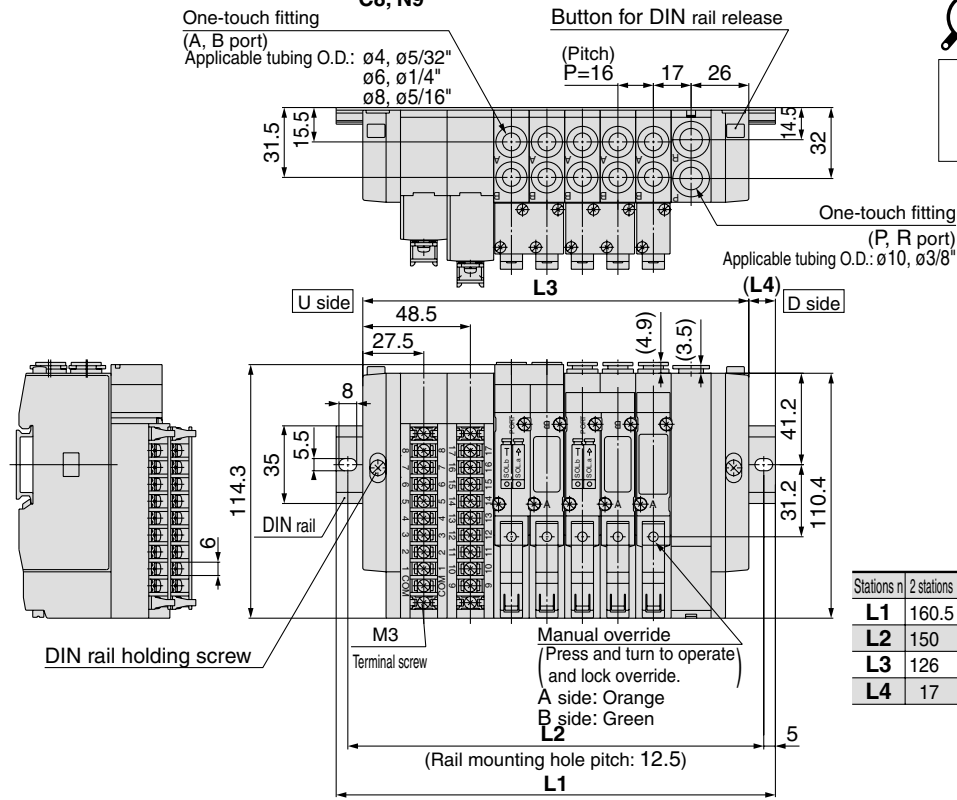
- SV
- SZ
- SY
- SYJ
- SX

SY5000: 18 Pins Terminal Block/Plug-in

SS5Y5-45T1U- Stations D-^{C4, N3}_{C6, N7} (18 pins)
^{C8, N9}

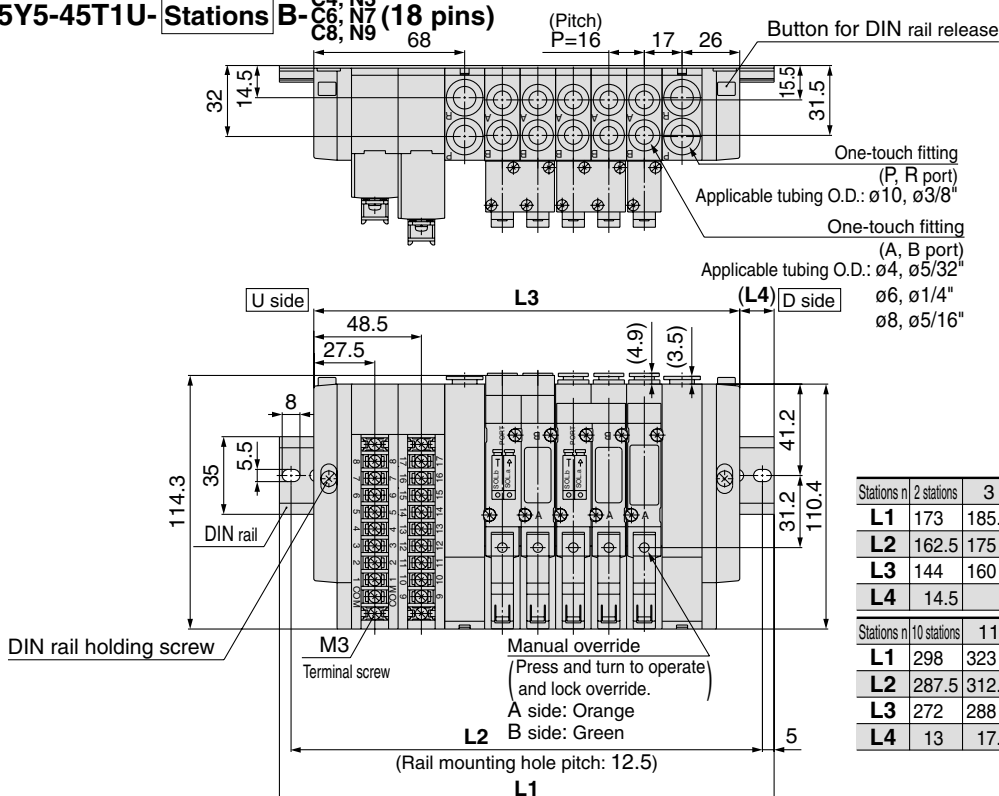


Note) The L1 to L4 dimensions of SS5Y5-45T1U-^{C4, N3}_{C6, N7} Stations U-^{C4, N3}_{C8, N9} are identical to those of SS5Y5-45T1U-^{C4, N3}_{C6, N7} Stations D-^{C8, N9}



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

SS5Y5-45T1U- Stations B-^{C4, N3}_{C6, N7} (18 pins)
^{C8, N9}

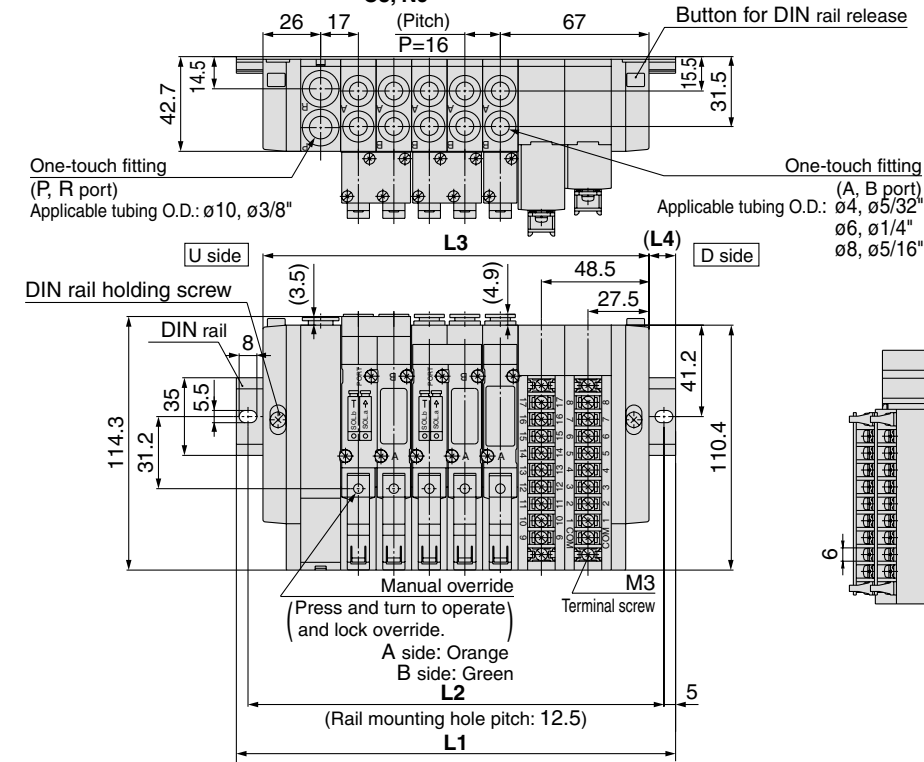


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|------------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 248 | 273 | 285.5 |
| L2 | 162.5 | 175 | 200 | 212.5 | 225 | 237.5 | 262.5 | 275 |
| L3 | 144 | 160 | 176 | 192 | 208 | 224 | 240 | 256 |
| L4 | 14.5 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | |

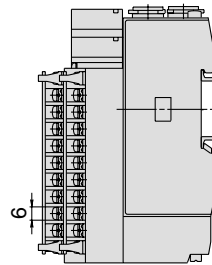
| Stations n | 10 stations | 11 | 12 | 13 | 14 | 15 | 16 | 17 stations |
|------------|-------------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 298 | 323 | 335.5 | 348 | 360.5 | 385.5 | 398 | 410.5 |
| L2 | 287.5 | 312.5 | 325 | 337.5 | 350 | 375 | 387.5 | 400 |
| L3 | 272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

SY5000: 18 Pins Terminal Block/Plug-in

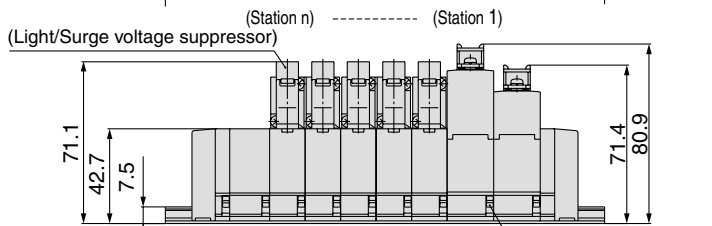
SS5Y5-45T1D- Stations U-C₄, N₃-C₆, N₇ (18 pins) C₈, N₉



Note) The L1 to L4 dimensions of SS5Y5-45T1D- Stations D-C₄, N₃-C₆, N₇ are identical to those of SS5Y5-45T1D- Stations U-C₄, N₃-C₆, N₇.

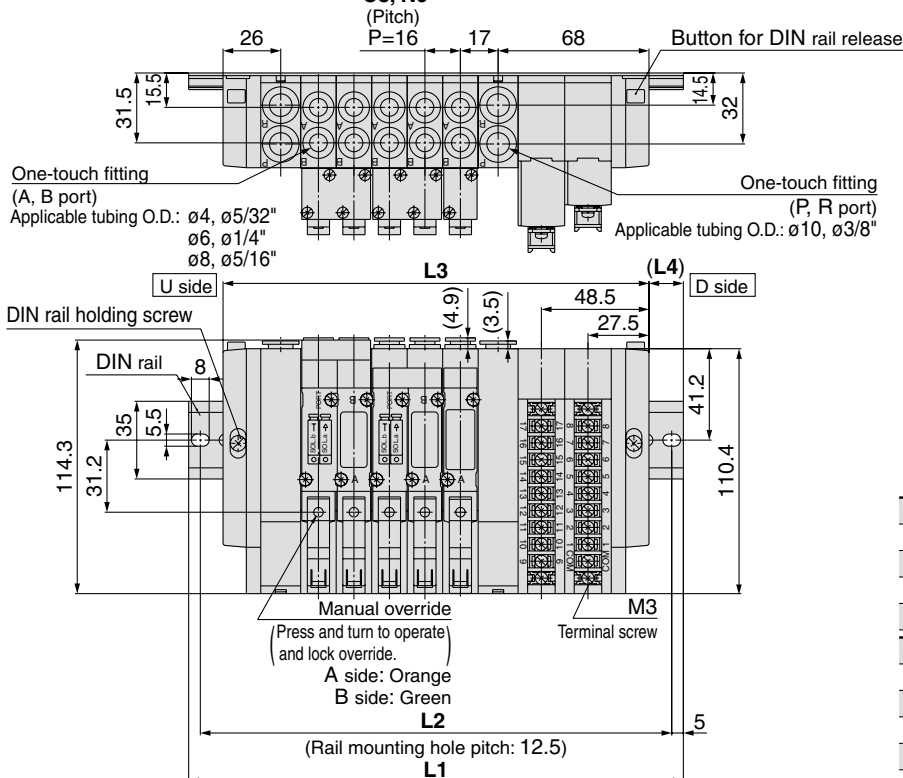


- SV
- SZ
- SY
- SYJ
- SX



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

SS5Y5-45T1D- Stations B-C₄, N₃-C₆, N₇ (18 pins) C₈, N₉

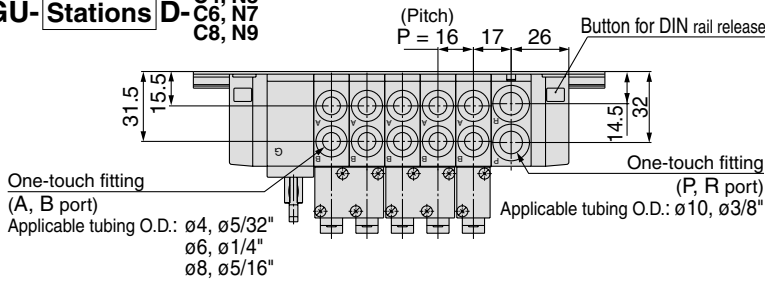


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|------------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 248 | 273 | 285.5 |
| L2 | 162.5 | 175 | 200 | 212.5 | 225 | 237.5 | 262.5 | 275 |
| L3 | 144 | 160 | 176 | 192 | 208 | 224 | 240 | 256 |
| L4 | 14.5 | 12.5 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 |

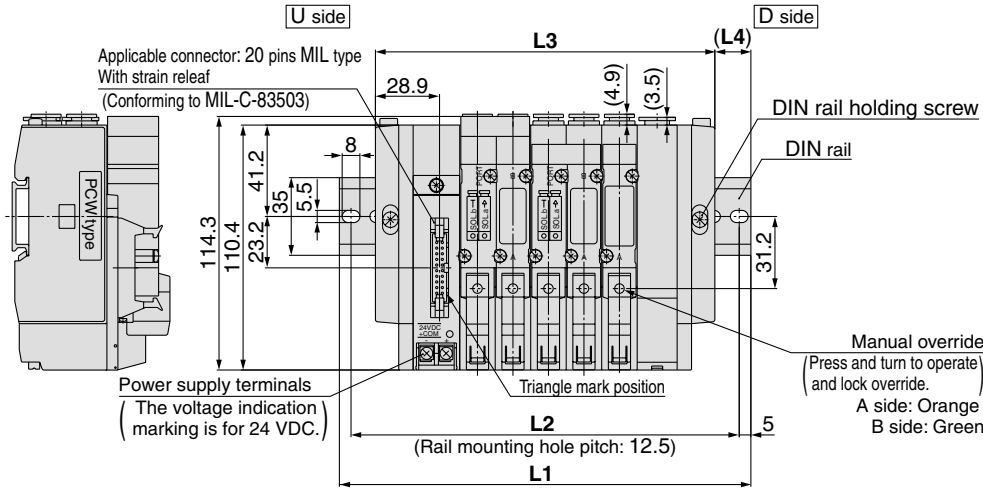
| Stations n | 10 stations | 11 | 12 | 13 | 14 | 15 | 16 | 17 stations |
|------------|-------------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 298 | 323 | 335.5 | 348 | 360.5 | 385.5 | 398 | 410.5 |
| L2 | 287.5 | 312.5 | 325 | 337.5 | 350 | 375 | 387.5 | 400 |
| L3 | 272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

SY5000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

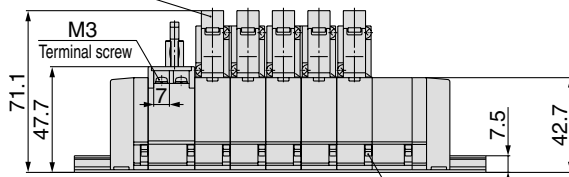
SS5Y5-45GU- Stations D- C4, N3
C6, N7
C8, N9



Note) The L1 to L4 dimensions of SS5Y5-45GU- Stations U-C4, N3, C6, N7, C8, N9 are identical to those of SS5Y5-45GU- Stations D-C4, N3, C6, N7, C8, N9.

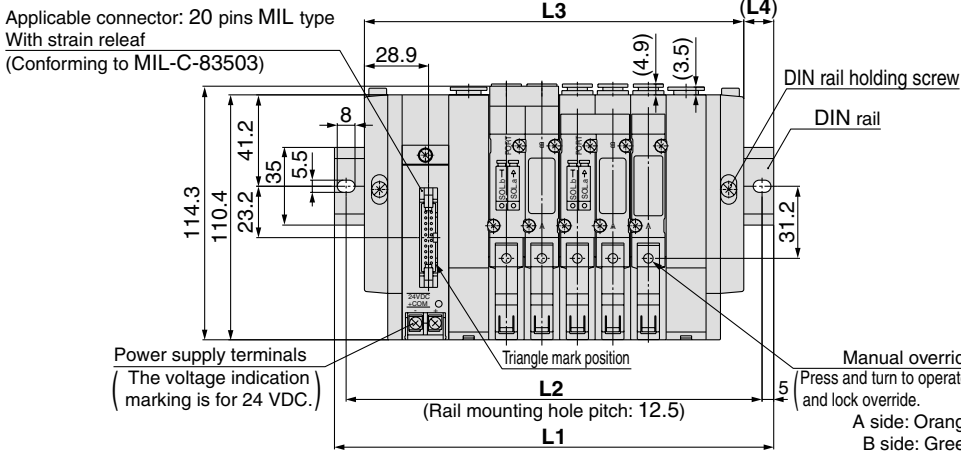
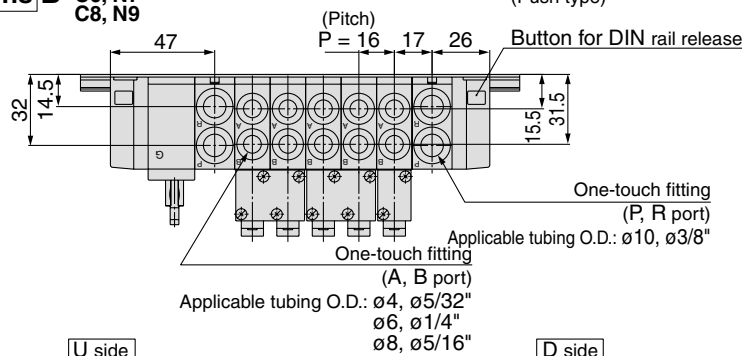


(Light/Surge voltage suppressor) (Station n)----- (Station 1)



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

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

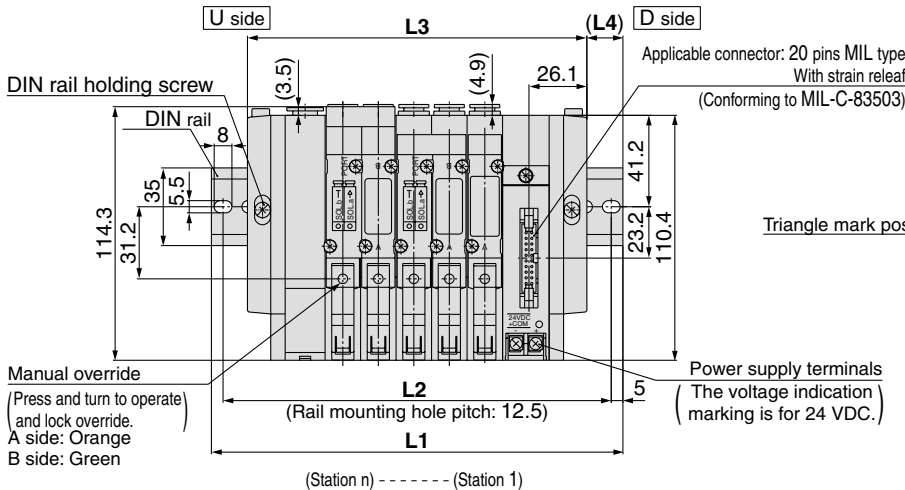
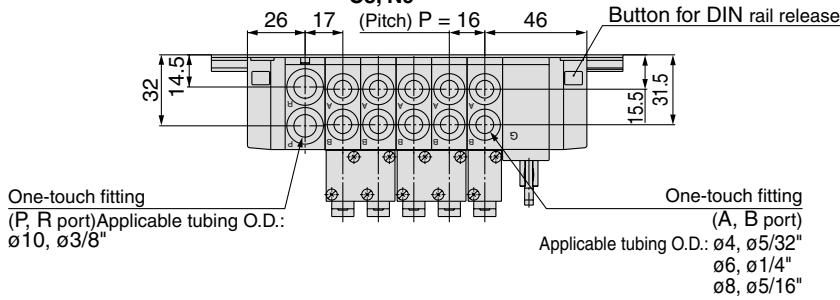


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |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

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

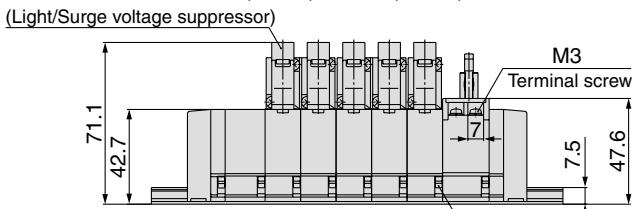
SY5000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

SS5Y5-45GD- Stations U-^{C4, N3} C6, N7 C8, N9



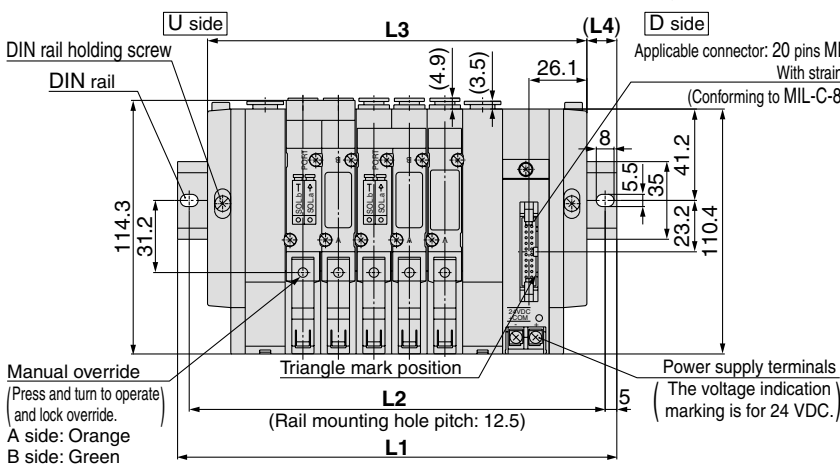
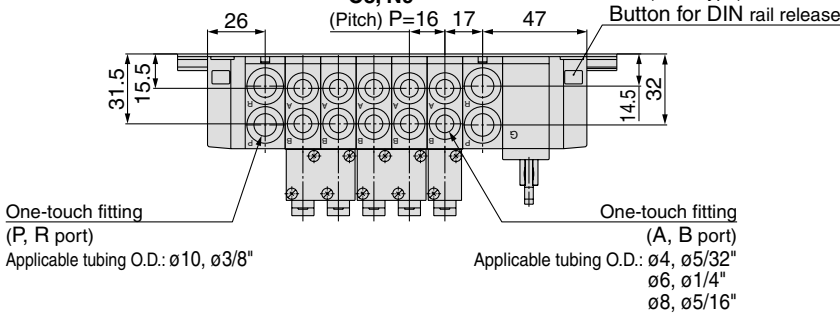
Note) The L1 to L4 dimensions of SS5Y5-45GD- Stations D-^{C4, N3}
C6, N7
C8, N9 are identical to those of SS5Y5-45GD- Stations U-^{C4, N3}
C6, N7
C8, N9

- SV
- SZ
- SY
- SYJ
- SX



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

SS5Y5-45GD- Stations B-^{C4, N3} C6, N7 C8, N9

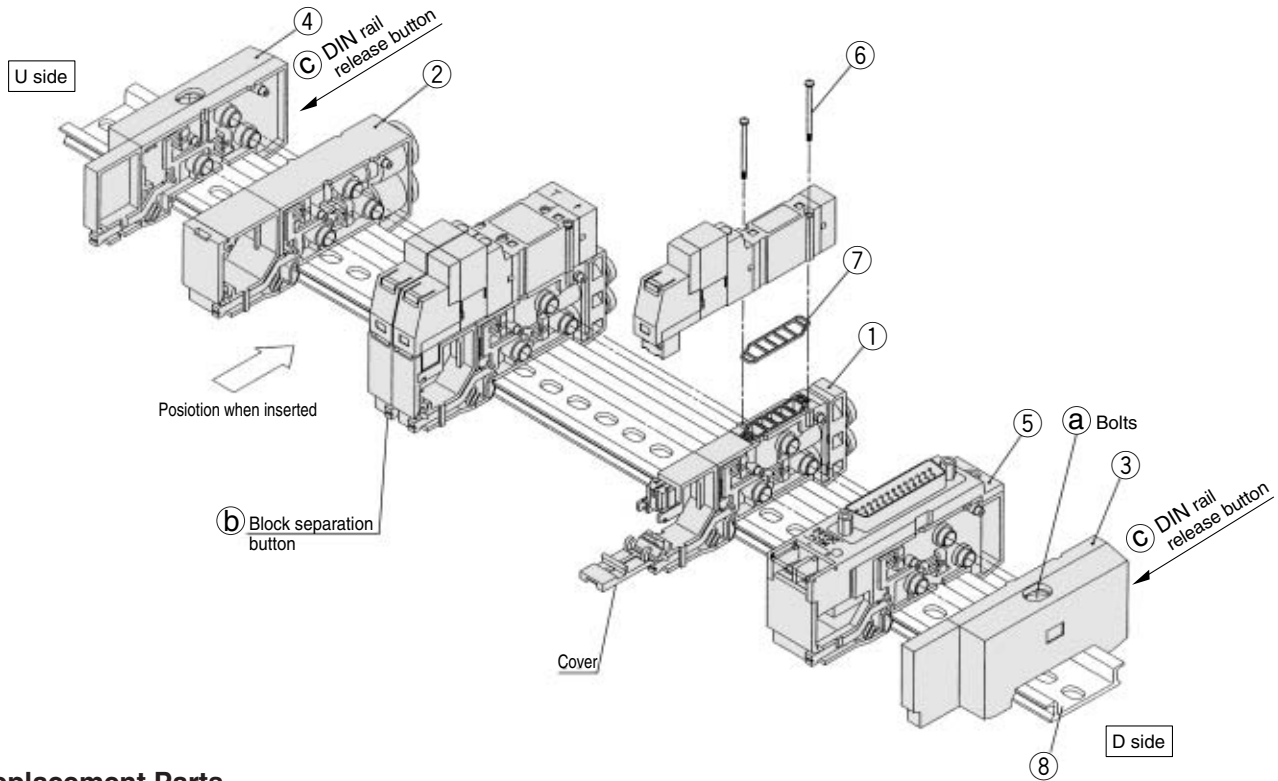


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |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

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

DIN Rail Manifold Exploded View

Type 45F (D-sub Connector) Manifold



Replacement Parts

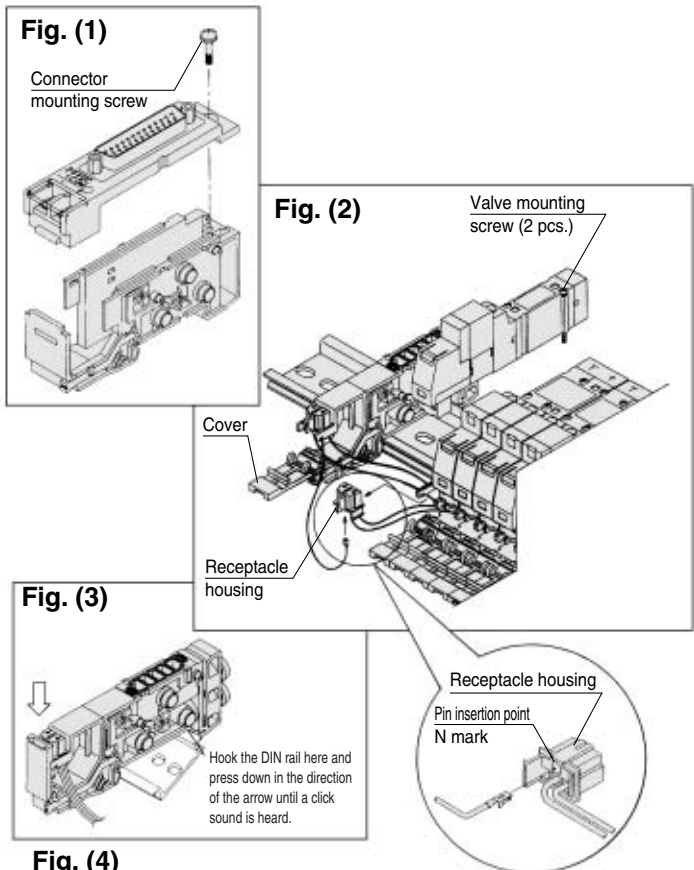
| No. | Description | Part no. | | Note |
|-----|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 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 $\phi 4$ (inch size) C6: With One-touch fitting for $\phi 6$ N3: With One-touch fitting for $\phi 5/32$ " N7: With One-touch fitting for $\phi 1/4$ " |
| For 45(N) _{FF} (Flat ribbon cable) | SX ³ 000-50-5A-□□ | A, B port SY5000 (metric size) C4: With One-touch fitting for $\phi 4$ (inch size) C6: With One-touch fitting for $\phi 6$ C8: With One-touch fitting for $\phi 8$ 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 ^T ₁ (Terminal block) | SX ³ 000-50-7A-□□ | |

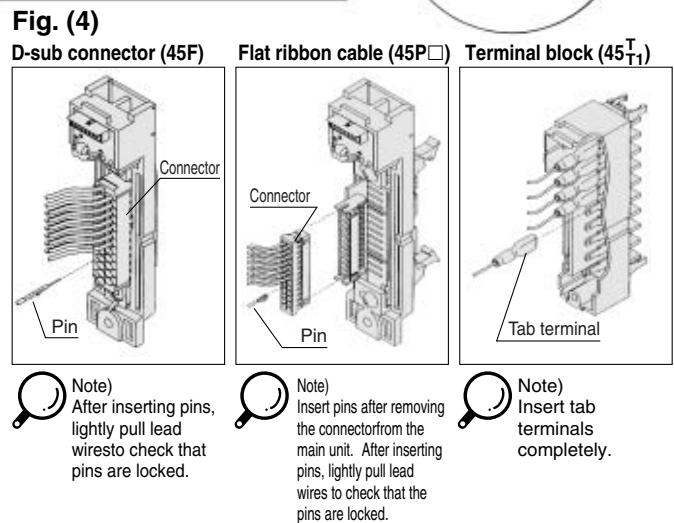
How to Increase Manifold Base

- 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)



SV
 SZ
 SY
 SYJ
 SX

- ⚠ 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.



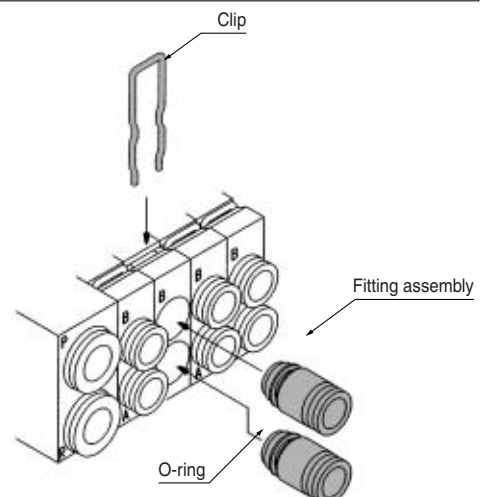
Fitting Assembly

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.

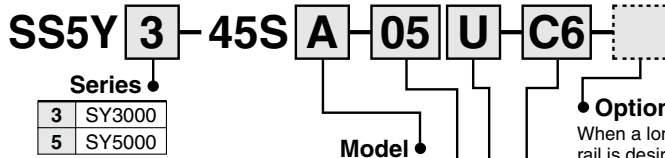
| Metric size | | Inch size | |
|-------------|--------------------------|----------------|----------------|
| SY3000 | One-touch fitting for ø4 | VVQ1000-50A-C4 | VVQ1000-50A-N3 |
| | One-touch fitting for ø6 | VVQ1000-50A-C6 | VVQ1000-50A-N7 |
| | One-touch fitting for ø4 | VVQ1000-51A-C4 | VVQ1000-51A-N3 |
| SY5000 | One-touch fitting for ø6 | VVQ1000-51A-C6 | VVQ1000-51A-N7 |
| | One-touch fitting for ø8 | VVQ1000-51A-C8 | 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



| 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 require 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 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 | |

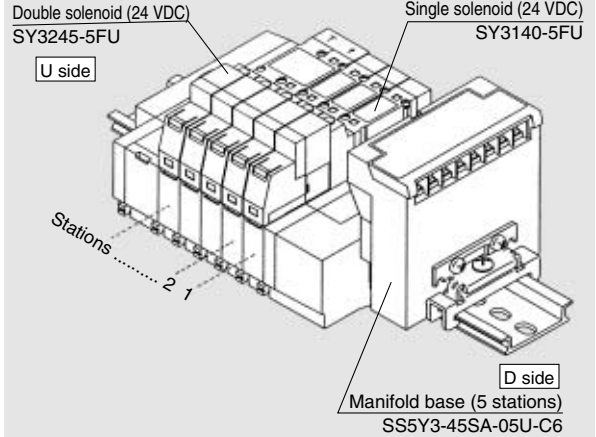
* For special specifications, indicate separately on the manifold specification sheet.

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-STA1 | 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 |

How to Order Valve Manifold Assembly

Ordering example

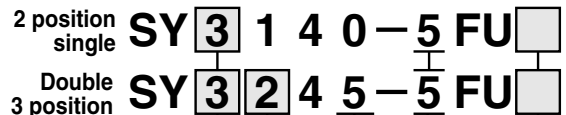


SS5Y3-45SA-05U-C6 1 set (Type 45S with serial unit 5 stations manifold base part no.)
* SY3140-5FU 3 sets (Single solenoid part no.)
* SY3245-5FU 1 set (Double solenoid part no.)

* 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



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 |

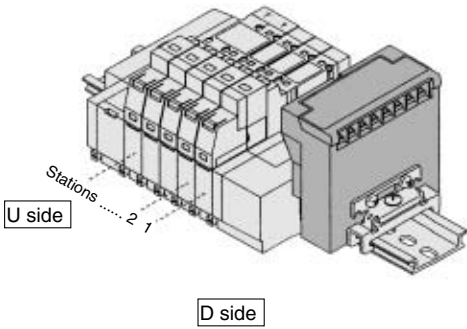
Rated voltage
5 24 VDC

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 |

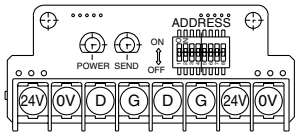
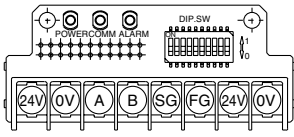
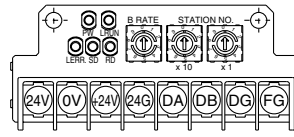
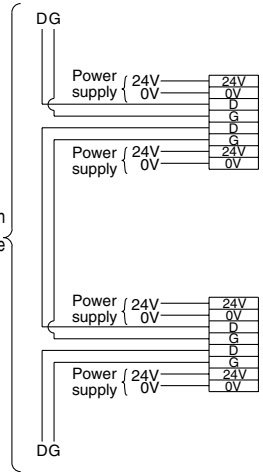
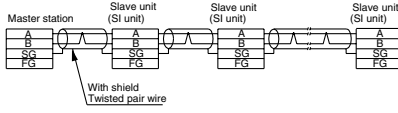
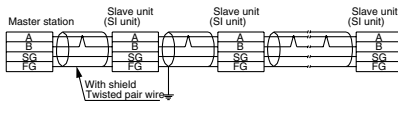
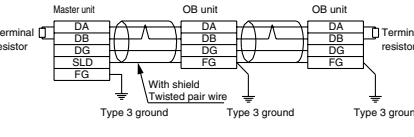
| | Type SA Applicable to Series EX300 | Type SB Mitsubishi Electric Corporation MELSECNET/mini-S3 Data Link System | | | | | | | | | | | | | | | | | | |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----|--------------------------------|---------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-------|------------------------------------|-----|-------------------------------------------------------------------------|----|--------------------------------|----|------------------------------|------|-----------------------------------------------------------------------------------|
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| LED | Description | | | | | | | | | | | | | | | | | | | |
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| 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. | Lights up when data reception error occurs; goes off when the error is corrected. | | | | | | | | | | | | | | | | | | | |
| 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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| LED | Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RUN | Lights up when transmission is normal and PLC is in operation mode. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T/R | Flashes when transmission is normal; lights up when it is abnormal. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LED | Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POWER | Lights up when power supply is ON. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RUN | Lights up when power supply is ON and the slave unit is operating normally. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ERROR | Lights up in cases of abnormal slave unit switch setting, abnormal communications, when the master unit PLC has stopped or if the slave unit is defective. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R.SET HOLD | Lights up when receiving the control input from the master unit. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LED | Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POWER | Lights up when power supply is ON. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMM. | Flashes when sending and receiving data. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALARM | Lights up when the unit is abnormal; flashes for setting error. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | <p>a) 2-wire type Wiring does not include signal ground line (SG).</p> <p>a) 3-wire type Wiring does not include signal ground line (SG).</p> | | | | | | | | | | | | | | | | | | | | | | | | | |

| | Type SF1 NKE Corporation Uni-wire System | Type SG Rockwell Automation, Inc. Allen Bradley Remote I/O (RIO) System | Type SJ1, SJ2 SUNX Corporation S-LINK System | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------|------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-------|------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-------|------------------------------------|------|----------------------------------------------------------------------------|
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| LED | Description | | | | | | | | | | | | | | | | | | | | | | |
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| SEND | Transmission indicator: Flashes when normal, flashes slowly when abnormal. | | | | | | | | | | | | | | | | | | | | | | |
| Note | <ul style="list-style-type: none"> Uni-wire System Send unit: SD-120 No. of output points: 16 points | <ul style="list-style-type: none"> Remote I/O (RIO) System No. of output points: 16 points | <ul style="list-style-type: none"> S-LINK System S-LINK Controller: SL-CU1 No. of output points: 16 points (Type SJ1) No. of output points: 8 points (Type SJ2) | | | | | | | | | | | | | | | | | | | | |
| Cable wiring | | | <p>a) Type T branching multi-drop wiring (S-LINK System) b) Crossover wiring (Sensor Link System)</p> <p>The above is the example of using dedicated S-LINK flat ribbon cable SL-RCMI00.</p> | | | | | | | | | | | | | | | | | | | | |

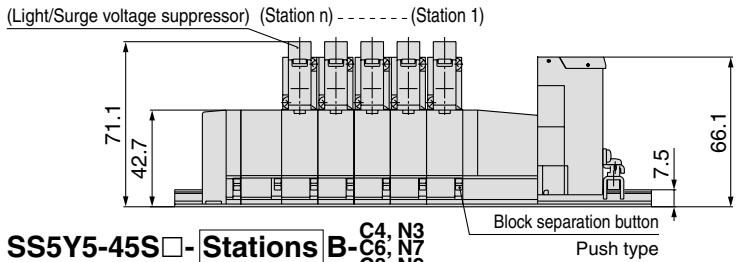
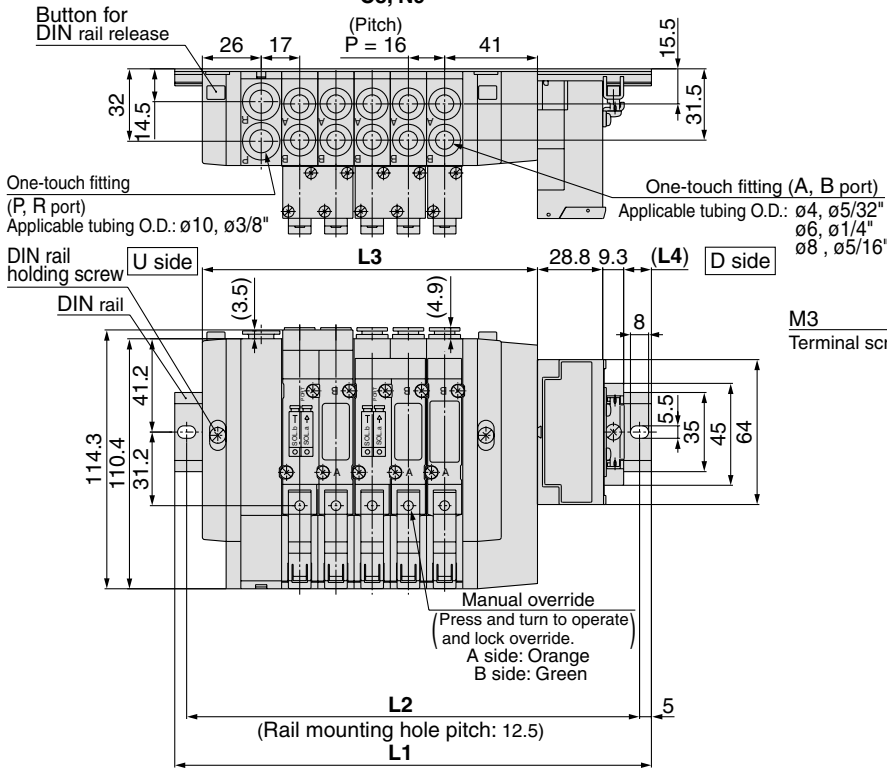
| | Type SK Fuji Electric Co, Ltd. T Link Mini System | Type SDQ DeviceNet | Type SR1, SR2 OMRON Corporation CompoBus/S System | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------|------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-------|-------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-------|---------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|
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| LED | Description | | | | | | | | | | | | | | | | | | | | | | |
| POWER | Lights up when power supply is ON. | | | | | | | | | | | | | | | | | | | | | | |
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| Note | <ul style="list-style-type: none"> T Link Mini System Master unit: FTM100B Converter: FRC100A-G02 Repeater: FRC200A-C10 No. of output points: 16 points | <ul style="list-style-type: none"> DeviceNet OMRON Corporation: CompoBus/D System Master station unit: C200HW-DSM21 No. of output points: 16 points | <ul style="list-style-type: none"> CompoBus/S System Master unit: C200HW-SRM21 Master unit: COM1-SRM21 No. of output points: 16 points (Type SR1) No. of output points: 8 points (Type SR2) | | | | | | | | | | | | | | | | | | | | |
| Cable wiring | <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> | | | | | | | | | | | | | | | | | | | | | | |

| | <p>Type SH NKE Corporation Uni-wire H System</p> | <p>Type SU JEMANET (JPCN-1)</p> | <p>Type SV Mitsubishi Electric Corporation CC-LINK System</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-------|--------------------------------------------|------|-------------------------------------|-------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-----|---------------------------------------------------------------|-------|---------------------------------------|----|------------------------------|----|--------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------|
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| LED | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POWER | Lights up when power supply is ON. (Lights on when normal; flickers when voltage drops.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEND | Transmission indicator: flashes when normal; goes out or lights up when abnormal. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LED | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POWER | Lights up when SI unit power supply is ON. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMM | Lights up for normal communication. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALARM | Lights up for abnormal communication. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LED | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SD | Lights up when sending data. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RD | Lights up when receiving data. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L ERR. | Lights up for transmission error and setting error; flashes when station or transmission speed settings are changed during operation. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note</p> | <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 | <ul style="list-style-type: none"> • CC-Link System Master unit: AJ61BT11 Master unit: A1SJ61BT11 Master unit: AJ61QBT11 Master unit: A1SJ61QBT11 • No. of output points: 16 points | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Cable wiring</p> |  | <p>a) 2-wire type</p>  <p>a) 3-wire type</p>  |  | | | | | | | | | | | | | | | | | | | | | | | | | | |

- SV
- SZ
- SY
- SYJ
- SX

Series SY5000: Serial Transmission Unit/Plug-in

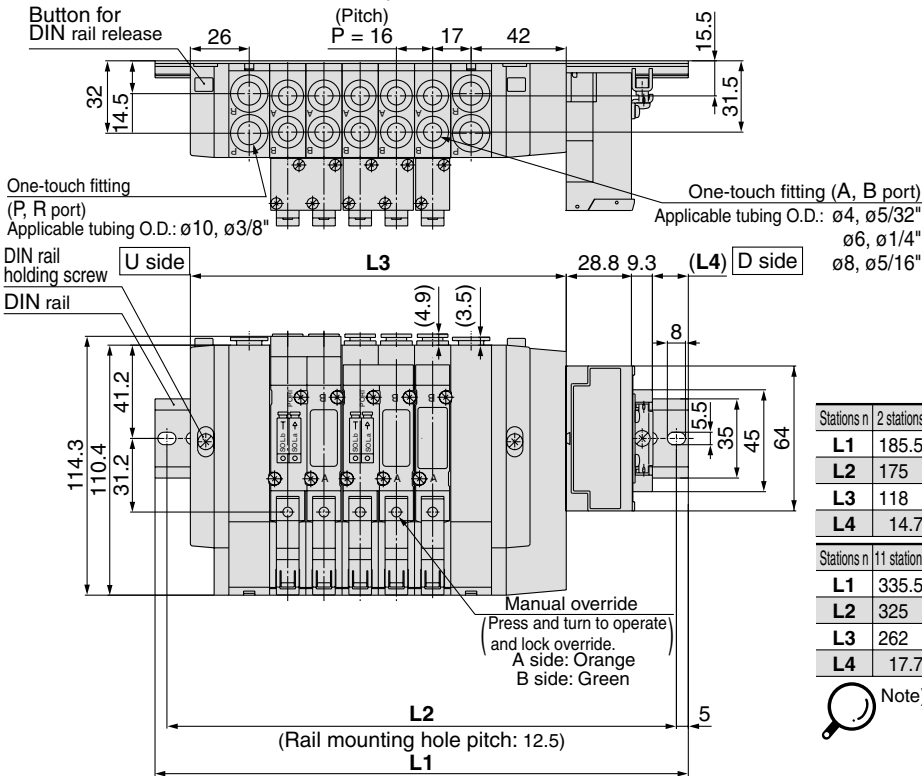
SS5Y5-45S□ - Stations U-C4, N3 C6, N7 C8, N9



| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 | 298 |
| L2 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 | 287.5 |
| L3 | 100 | 116 | 132 | 148 | 164 | 180 | 196 | 212 | 228 |
| L4 | 17.45 | 15.7 | 13.95 | 12.2 | 16.7 | 14.95 | 13.2 | 17.7 | 15.95 |

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

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



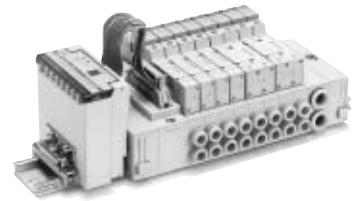
| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 185.5 | 198 | 223 | 235.5 | 248 | 260.5 | 285.5 | 298 | 310.5 |
| L2 | 175 | 187.5 | 212.5 | 225 | 237.5 | 250 | 275 | 287.5 | 300 |
| L3 | 118 | 134 | 150 | 166 | 182 | 198 | 214 | 230 | 246 |
| L4 | 14.7 | 12.95 | 17.45 | 15.7 | 13.95 | 12 | 16.5 | 14.95 | 13.2 |

| Stations n | 11 stations | 12 | 13 | 14 | 15 | 16 stations |
|------------|-------------|-------|-------|-------|-------|-------------|
| L1 | 335.5 | 348 | 360.5 | 373 | 398 | 410.5 |
| L2 | 325 | 337.5 | 350 | 362.5 | 387.5 | 400 |
| L3 | 262 | 278 | 294 | 310 | 326 | 342 |
| L4 | 17.7 | 15.95 | 14.2 | 12.45 | 16.95 | 15.2 |

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

- SV
- SZ
- SY
- SYJ
- SX

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



Type 45S1

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.

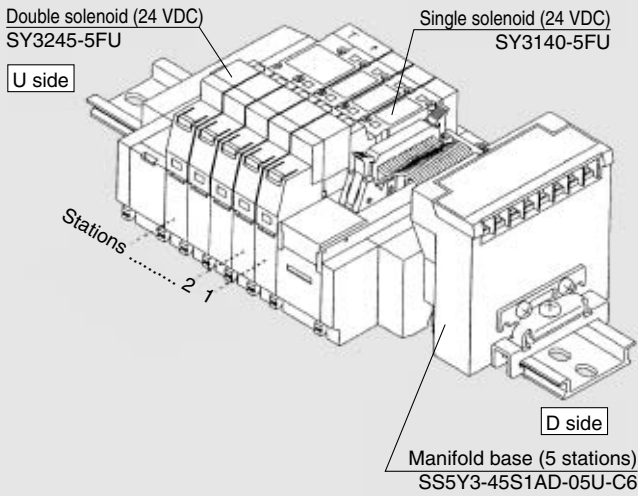
| Symbol | Specifications | For SS5Y□-45S1 | Symbol | Specifications: | For SS5Y□-45S1 |
|-----------|----------------------------------------------------------------|----------------|-----------|----------------------------------------------|----------------|
| A | With general type SI unit (Series 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



- SS5Y3-45S1AD-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)

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

Rated voltage

Manual override

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

SV

SZ

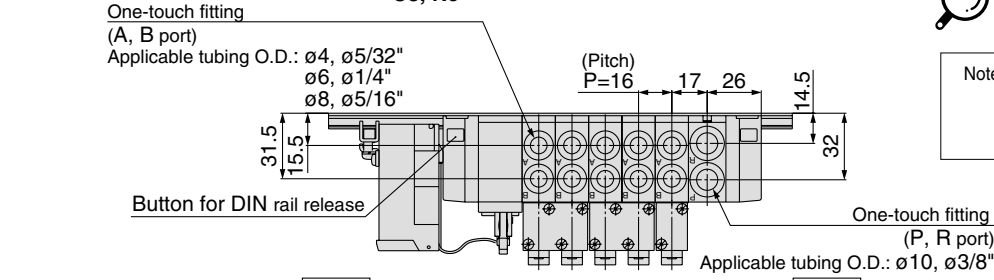
SY

SYJ

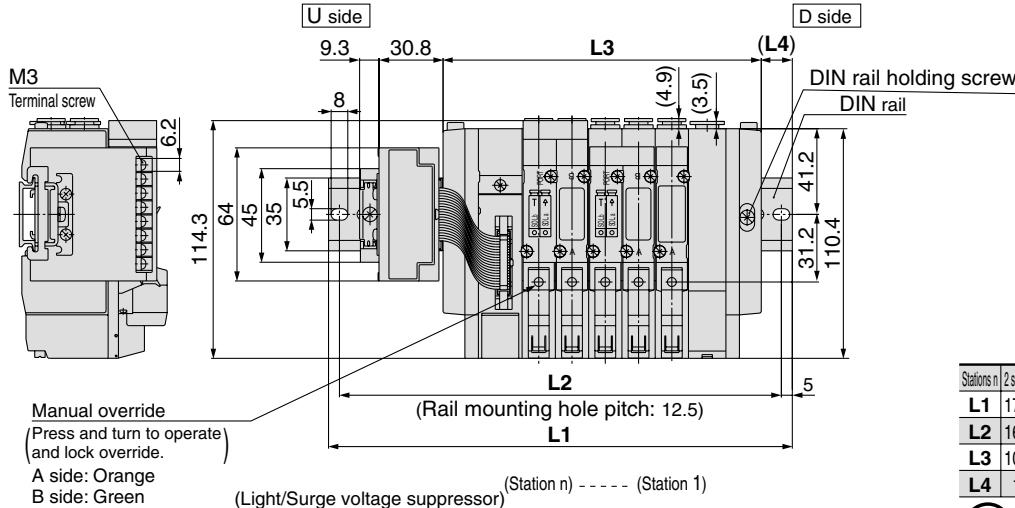
SX

SY5000: Serial Transmission Unit/Plug-in

SS5Y5-45S1□U- Stations D- C4, N3 C6, N7 C8, N9



Note) The L1 to L4 dimensions of SS5Y5-45S1□U- Stations U- C4, N3 C6, N7 C8, N9 are identical to those of SS5Y5-45S1□U- Stations D- C4, N3 C6, N7 C8, N9.

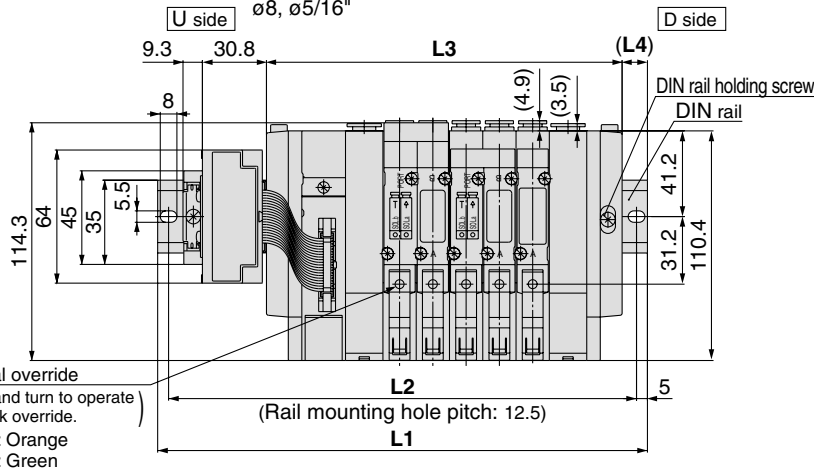
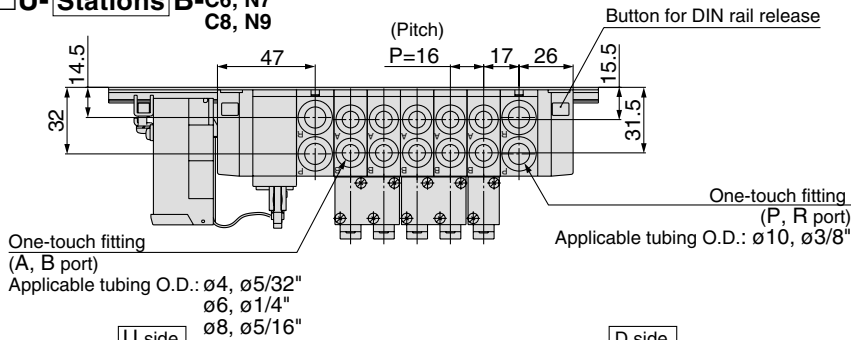


| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 298 |
| L2 | 162.5 | 175 | 200 | 212.5 | 225 | 250 | 262.5 | 275 | 287.5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



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

SS5Y5-45S1□U- Stations B- C4, N3 C6, N7 C8, N9



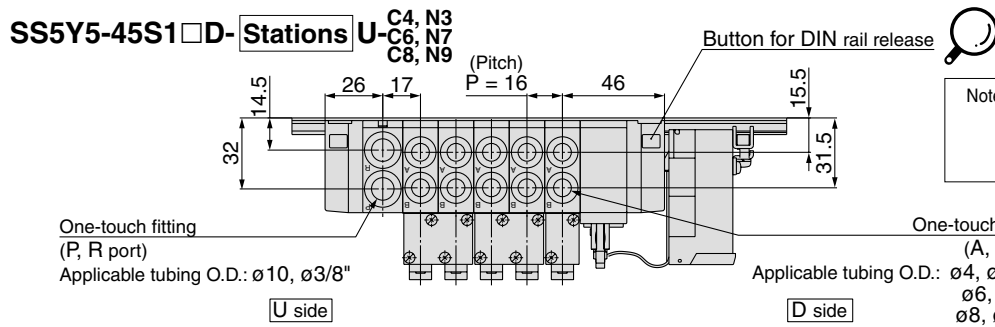
| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 198 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 310.5 | 323 |
| L2 | 187.5 | 200 | 212.5 | 225 | 250 | 262.5 | 275 | 300 | 312.5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

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



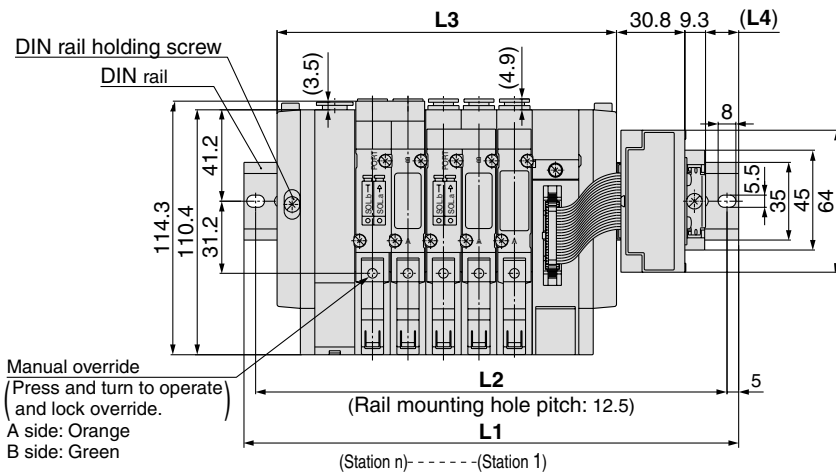
Note) Width of SI unit applicable to "E": Matsushita Electric Works, Ltd. and "G": Rockwell Automation, Inc. widens to [24.3 mm]. For further information, please consult with SMC.

SY5000: Serial Transmission Unit/Plug-in



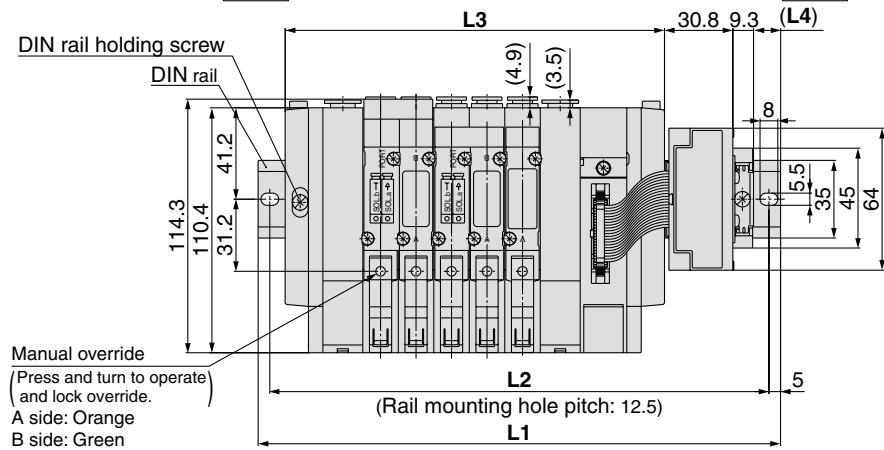
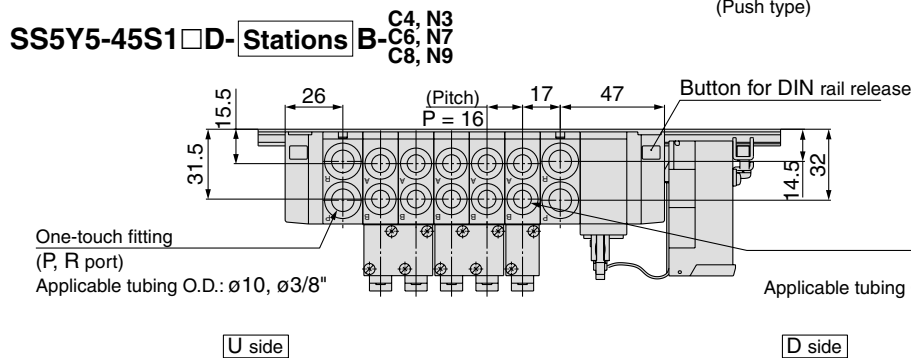
Note) The L1 to L4 dimensions of **SS5Y5-45S1 □ D - Stations D** ^{C4, N3}
_{C6, N7}
_{C8, N9} are identical to those of **SS5Y5-45S1 □ D - Stations U** ^{C4, N3}
_{C6, N7}
_{C8, N9}.

- SV
- SZ
- SY
- SYJ
- SX



| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 298 |
| L2 | 162.5 | 175 | 200 | 212.5 | 255 | 250 | 262.5 | 275 | 287.5 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| L4 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

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



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

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

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

3 Port Valve

Series SY300/500

Mixed Mounting Type on 5 Port Valve Manifold

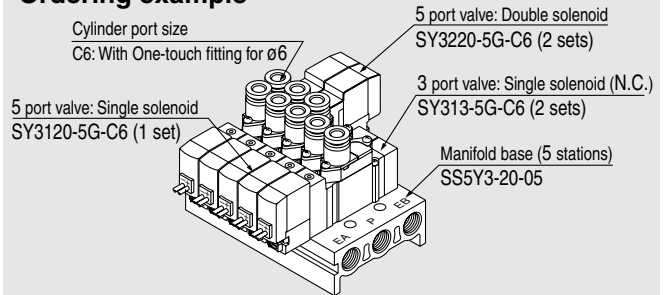
3 port valve can be mounted on manifold for 5 port valve.

Application

Possible to be mounted on all kinds of manifolds for Series SY3000/5000.
Refer to "How to Order Manifold" for details.

How to Order Valve Manifold Assembly

Ordering example



| | |
|----------------------|----------------------------------------------------------|
| SS5Y3-20-05 | 1 set (Type 20, 5 station manifold base part no.) |
| *SY313-5G-C6 | 2 sets (3 port valve, type NC part no.) |
| *SY3120-5G-C6 | 1 set (5 port valve, single solenoid part no.) |
| *SY3220-5G-C6 | 2 sets (5 port valve, double solenoid part no.) |

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

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

Body Ported/How to Order Valves

Individual Wiring: For SS5Y³-20

SY 5 1 3 [] [] 5 L [] [] 01 []

Series

| | |
|---|-------|
| 3 | SY300 |
| 5 | SY500 |

Type of actuation

| | |
|---|------------------------|
| 1 | Normally closed (N.C.) |
| 2 | Normally open |

Solenoid type

| | |
|-----|-----------------|
| Nil | Single solenoid |
| D | Double solenoid |

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.

Thread type

| | |
|-----|------|
| Nil | Rc |
| F | G |
| N | NPT |
| T | NPTF |

A port size
Thread piping

| Symbol | Port size | Applicable series |
|--------|-----------|-------------------|
| M5 | M5 x 0.8 | SY300 |
| 01 | 1/8 | SY500 |

One-touch fitting (Metric size)

| Symbol | Port size | Applicable series |
|--------|--------------------------|-------------------|
| C4 | One-touch fitting for ø4 | SY300 |
| C6 | One-touch fitting for ø6 | SY300 |
| C6 | One-touch fitting for ø6 | SY500 |
| C8 | One-touch fitting for ø8 | SY500 |

One-touch fitting (Inch size)

| Symbol | Port size | Applicable series |
|--------|-------------------------------|-------------------|
| N3 | One-touch fitting for ø 5/32" | SY300 |
| N7 | One-touch fitting for ø 1/4" | SY300 |
| N7 | One-touch fitting for ø 1/4" | SY500 |
| N9 | One-touch fitting for ø 5/16" | SY500 |

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 (SY500 only)

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

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

Rated voltage

| DC | AC | | |
|----|----|--------|-------------------|
| 5 | 1 | 24 VDC | 100 VAC |
| 6 | 2 | 12 VDC | 200 VAC |
| V | 3 | 6 VDC | 110 VAC [115 VAC] |
| S | 4 | 5 VDC | 220 VAC [230 VAC] |
| R | | 3 VDC | |

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

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) | D: With connector | WO: Without connector cable |
| H: Lead wire length 600 mm | LN: Without lead wire | MN: Without lead wire | DO: Without connector | |
| | LO: Without connector | MO: Without connector | | |

* "LN", "MN" type: with 2 sockets. * For connector cable of M8 connector, refer to page 1-4-209.
* For DIN terminal of SY300 series, refer to page 1-4-207.
* DIN terminal type "Y" conforming to DIN 43650C is also available. For details, refer to page 1-4-201.

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.)

- SV
- SZ
- SY**
- SYJ
- SX

Body Ported/How to Order Valves

Flat ribbon cable: SS5Y³/₅-20P

Light/Surge voltage suppressor

| | |
|---|------------------------------------------------------|
| Z | With light/surge voltage suppressor |
| U | With light/surge voltage suppressor (Non-polar type) |

Note) Z: Positive common specifications only.

Rated voltage

| | |
|---|--------|
| 5 | 24 VDC |
| 6 | 12 VDC |

A port size Thread piping

| Symbol | Port size | Applicable series |
|--------|-----------|-------------------|
| M5 | M5 x 0.8 | SY300 |
| 01 | 1/8 | SY500 |

One-touch fitting (Metric size)

| Symbol | Port size | Applicable series |
|--------|--------------------------|-------------------|
| C4 | One-touch fitting for ø4 | SY300 |
| C6 | One-touch fitting for ø6 | SY300 |
| C6 | One-touch fitting for ø6 | SY500 |
| C8 | One-touch fitting for ø8 | SY500 |

One-touch fitting (Inch size)

| Symbol | Port size | Applicable series |
|--------|------------------------------|-------------------|
| N3 | One-touch fitting for ø5/32" | SY300 |
| N7 | One-touch fitting for ø1/4" | SY300 |
| N7 | One-touch fitting for ø1/4" | SY500 |
| N9 | One-touch fitting for ø5/16" | SY500 |

Thread type

| | |
|-----|------|
| Nil | Rc |
| F | G |
| N | NPT |
| T | NPTF |

Manual override

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

Rated voltage

| | |
|---|-------------------|
| 1 | 100 VAC |
| 3 | 110 VAC [115 VAC] |

Series

| | |
|---|-------|
| 3 | SY300 |
| 5 | SY500 |

Type of actuation

| | |
|---|------------------------|
| 1 | Normally closed (N.C.) |
| 2 | Normally open (N.C.) |

Solenoid type

| | |
|-----|-----------------|
| Nil | Single solenoid |
| D | Double solenoid |

For DC: SY 5 1 3 [] 5 LO Z [] [] []

For AC: SY 5 1 3 [] 1 LOZ [] [] []

Base Mounted/How to Order Valves

Individual wiring: For SS5Y³/₅-41/42/45

Series

| | |
|---|-------|
| 3 | SY300 |
| 5 | SY500 |

Type of actuation

| | |
|---|------------------------|
| 1 | Normally closed (N.C.) |
| 2 | Normally open (N.C.) |

Solenoid type

| | |
|-----|-----------------|
| Nil | Single solenoid |
| D | Double solenoid |

Pilot type

| | |
|-----|----------------|
| Nil | Internal pilot |
| R | External pilot |

* External pilot is not available for Type 41 manifold.

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 | AC |
|----|----|
| 5 | 1 |
| 6 | 2 |
| V | 3 |
| S | 4 |
| R | |

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 | | Electrical entry for D (SY500 only) | |
|------------------------------------|------------------------------------------------------|-------------------------------------|----------------------------------------|
| Nil | Without light/surge voltage suppressor | Nil | Without light/surge voltage suppressor |
| S | With surge voltage suppressor | S | With surge voltage suppressor |
| Z | With light/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

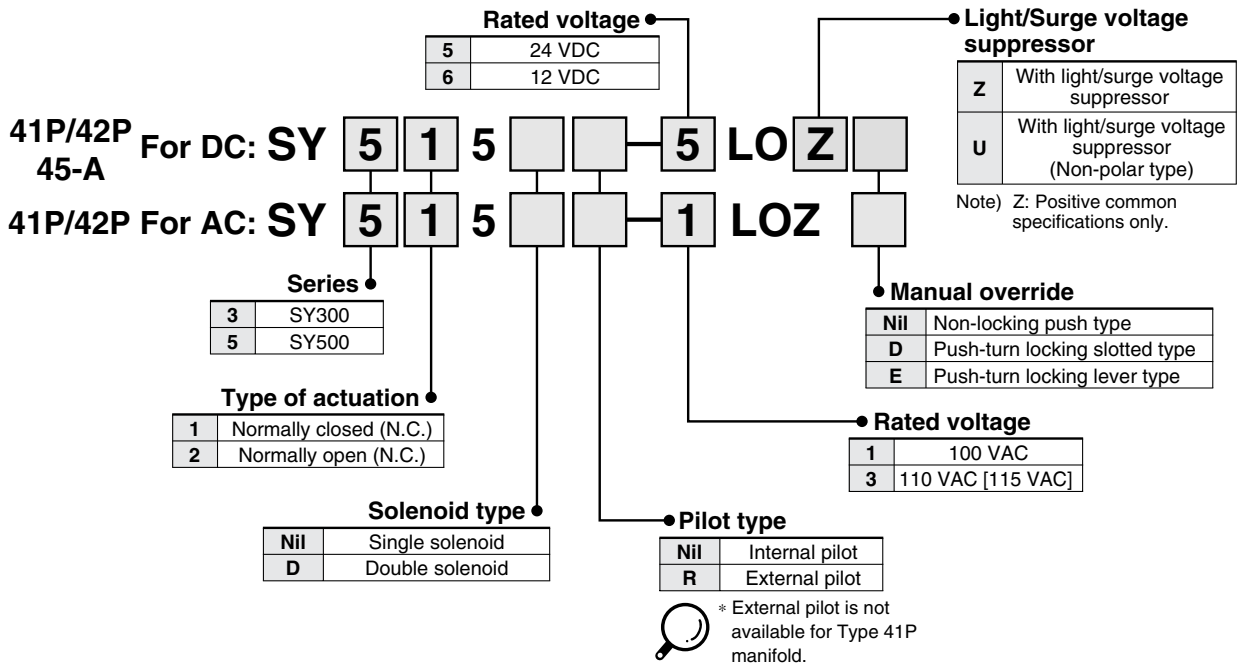
| 24, 12, 6, 5, 3 VDC/ 100, 110, 200, 220 VAC | | | 24, 12 VDC/ 100, 110, 200, 220 VAC | | 24, 12, 6, 5, 3 VDC | |
|------------------------------------------------|-----------------------------------|-----------------------------------|------------------------------------------|-----------------------------|------------------------|--|
| 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) | D: With connector | WO: Without connector cable | | |
| H: Lead wire length 600 mm | LN: Without lead wire | MN: Without lead wire | DO: Without connector | | | |
| | LO: Without connector | MO: Without connector | | | | |

* "LN", "MN" type: with 2 sockets.
 * For DIN terminal of SY300 series, refer to page 1-4-207.
 * DIN terminal type "Y" conforming to DIN

43650C is also available. For details, refer to page 1-4-201.
 * For connector cable of M8 connector, refer to page 1-4-209.

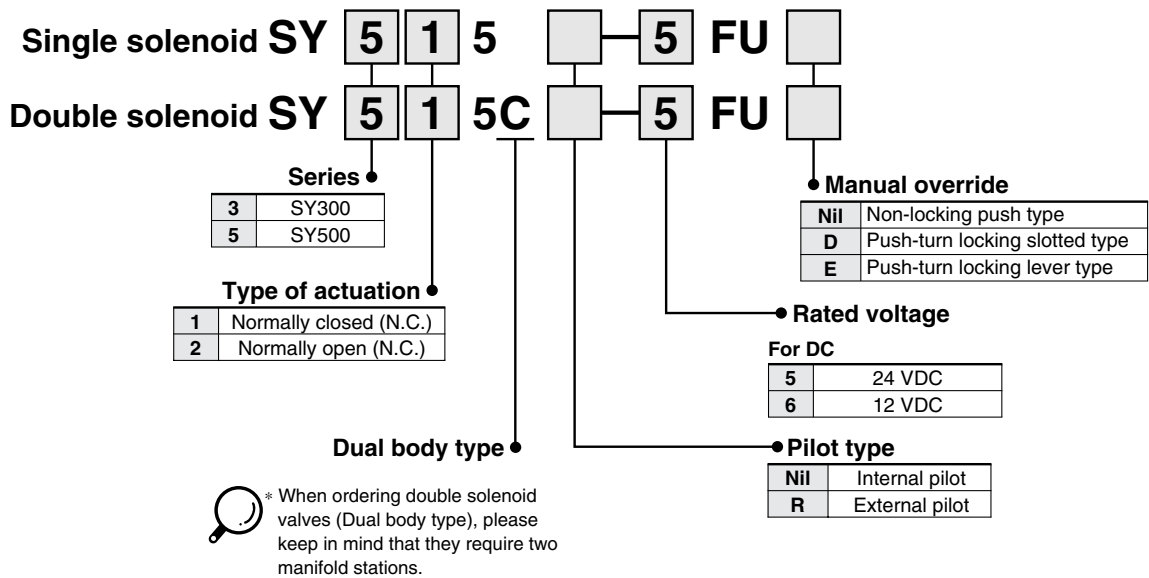
Base Mounted/How to Order Valves

Flat ribbon cable:
Connector box type: For SS5Y³-41P/42P/45-A



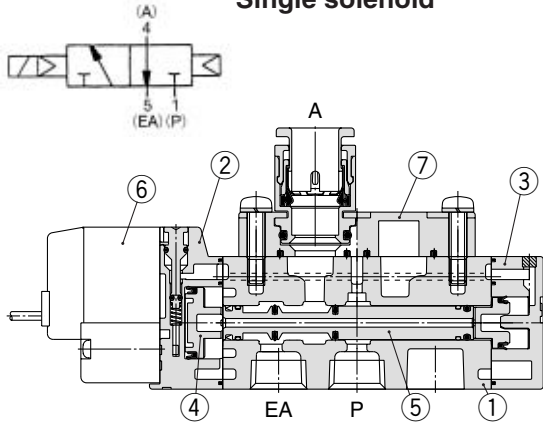
- SV
- SZ
- SY
- SYJ
- SX

Plug-in: For SS5Y³-45□

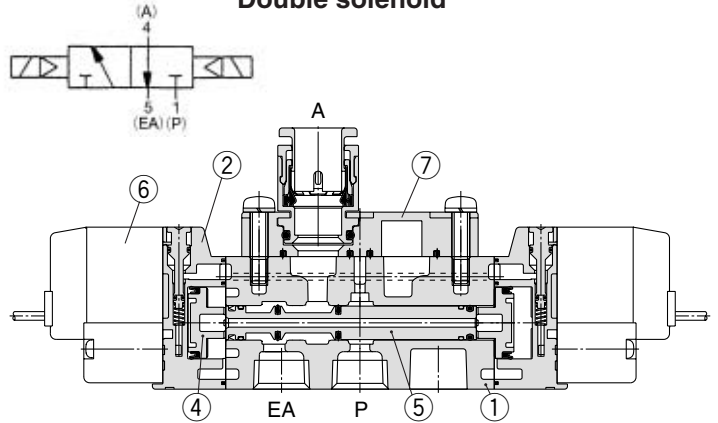


Construction

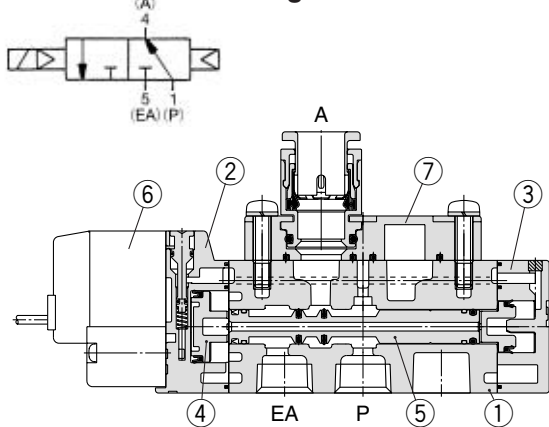
JIS Symbol
Single solenoid
**Normally closed (N.C.)
Single solenoid**



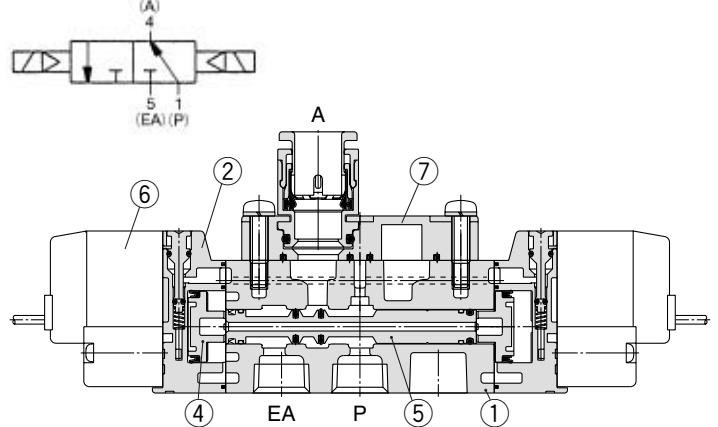
JIS Symbol
Double solenoid
**Normally closed (N.C.)
Double solenoid**



JIS Symbol
Single solenoid
**Normally open (N.O.)
Single solenoid**



JIS Symbol
Double solenoid
**Normally open (N.O.)
Double solenoid**



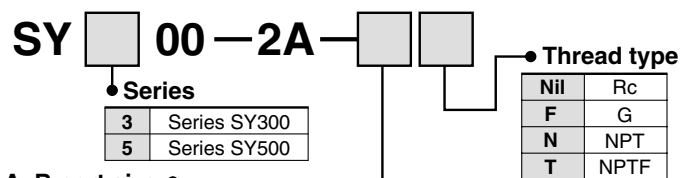
Component Parts

| No. | Description | Material | Note |
|-----|----------------------|--------------------------------------------------|-------|
| ① | Body | Aluminum die-casted (SY3000: Zinc die-casted) | White |
| ② | Adapter plate | Resin | White |
| ③ | End plate | Resin | White |
| ④ | Piston | Resin | — |
| ⑤ | Spool valve assembly | Aluminum, HNBR | — |

Replacement Parts

| No. | Description | No. |
|-----|------------------------|--------------------------------------------------------------|
| ⑥ | Pilot valve assembly | Refer to "How to Order Pilot Valve Assembly" on page 1-4-10. |
| ⑦ | M5 port block assembly | Refer to "How to Order Port Block Assembly" below. |

How to Order M5 Port Block Assembly



A, B port size

Thread piping

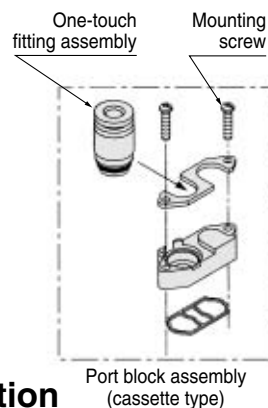
| Symbol | Port size | Applicable series |
|--------|-----------|-------------------|
| M5 | M5 x 0.8 | SY300 |
| O1 | 1/8 | SY500 |

One-touch fitting (Metric size)

| Symbol | Port size | Applicable series |
|--------|--------------------------|-------------------|
| C4 | One-touch fitting for ø4 | SY300 |
| C6 | One-touch fitting for ø6 | |
| C4 | One-touch fitting for ø4 | SY500 |
| C6 | One-touch fitting for ø6 | |
| C8 | One-touch fitting for ø8 | |

One-touch fitting (Inch size)

| Symbol | Port size | Applicable series |
|--------|------------------------------|-------------------|
| N3 | One-touch fitting for ø5/32" | SY300 |
| N7 | One-touch fitting for ø1/4" | |
| N3 | One-touch fitting for ø5/32" | SY500 |
| N7 | One-touch fitting for ø1/4" | |
| N9 | One-touch fitting for ø5/16" | |



* Only replacement of the fittings assembly is possible.

Metric size

| Series | One-touch fitting for | Part No. |
|--------|--------------------------|----------------|
| SY300 | One-touch fitting for ø4 | VVQ1000-50A-C4 |
| | One-touch fitting for ø6 | VVQ1000-50A-C6 |
| SY500 | One-touch fitting for ø4 | VVQ1000-51A-C4 |
| | One-touch fitting for ø8 | VVQ1000-51A-C8 |

Inch size

| Series | One-touch fitting for | Part No. |
|--------|------------------------------|----------------|
| SY300 | One-touch fitting for ø5/32" | VVQ1000-50A-N3 |
| | One-touch fitting for ø1/4" | VVQ1000-50A-N7 |
| SY500 | One-touch fitting for ø5/32" | VVQ1000-51A-N3 |
| | One-touch fitting for ø1/4" | VVQ1000-51A-N7 |
| | One-touch fitting for ø5/16" | VVQ1000-51A-N9 |

Caution

Mounting screw tightening torques

SY300 (M2) : 0.12 N·m
SY500 (M3) : 0.6 N·m

Specifications

Dimensions, specifications, solenoid specifications, response time and effective area are the same as 5 port valve.

Weight

Series SY300

| Valve model | Type of actuation | Weight (g) | |
|-------------------|-------------------|------------|---------------------|
| | | Grommet | L, M plug connector |
| SY3□3-□□-M5 | Single | 51 | 53 |
| | Double | 68 | 74 |
| SY3□3-□□-C4 N3 | Single | 56 | 59 |
| | Double | 74 | 79 |
| SY3□3-□□-C6 N7 | Single | 54 | 57 |
| | Double | 72 | 77 |
| SY3□5-□□ | Single | 47 | 50 |
| | Double | 65 | 70 |

Series SY500

| Valve model | Type of actuation | Weight (g) | | |
|------------------|-------------------|------------|---------------------|--------------|
| | | Grommet | L, M plug connector | DIN terminal |
| SY5□3-□-01□ | Single | 69 | 72 | 93 |
| | Double | 87 | 93 | 135 |
| SY5□3-□-C4 N3 | Single | 82 | 82 | 103 |
| | Double | 100 | 102 | 144 |
| SY5□3-□-C6 N7 | Single | 79 | 77 | 98 |
| | Double | 97 | 98 | 140 |
| SY5□3-□-C8 N9 | Single | 75 | 84 | 105 |
| | Double | 93 | 105 | 147 |
| SY5□5-□□ | Single | 55 | 58 | 79 |
| | Double | 73 | 78 | 120 |

SV

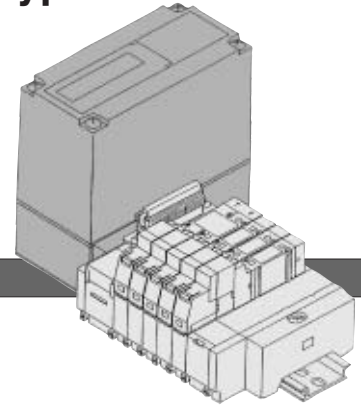
SZ

SY

SYJ

SX

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 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 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 •

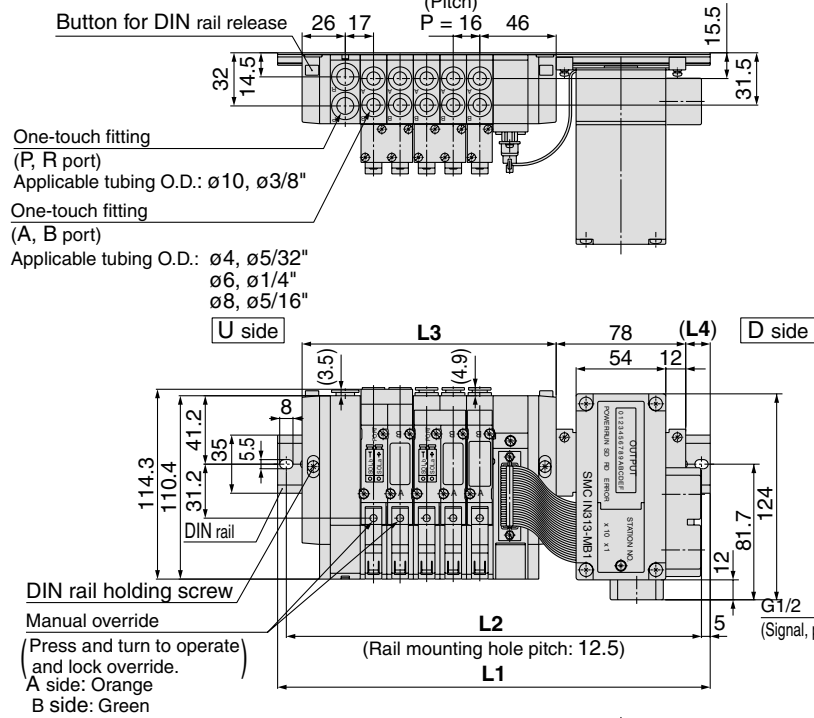
| | |
|---|--------|
| 5 | 24 VDC |
|---|--------|

Manual override •

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

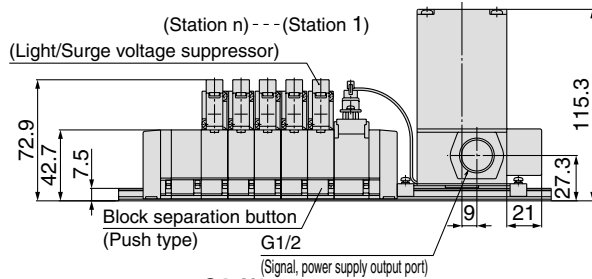
SY5000: Serial Transmission Unit/Plug-in

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



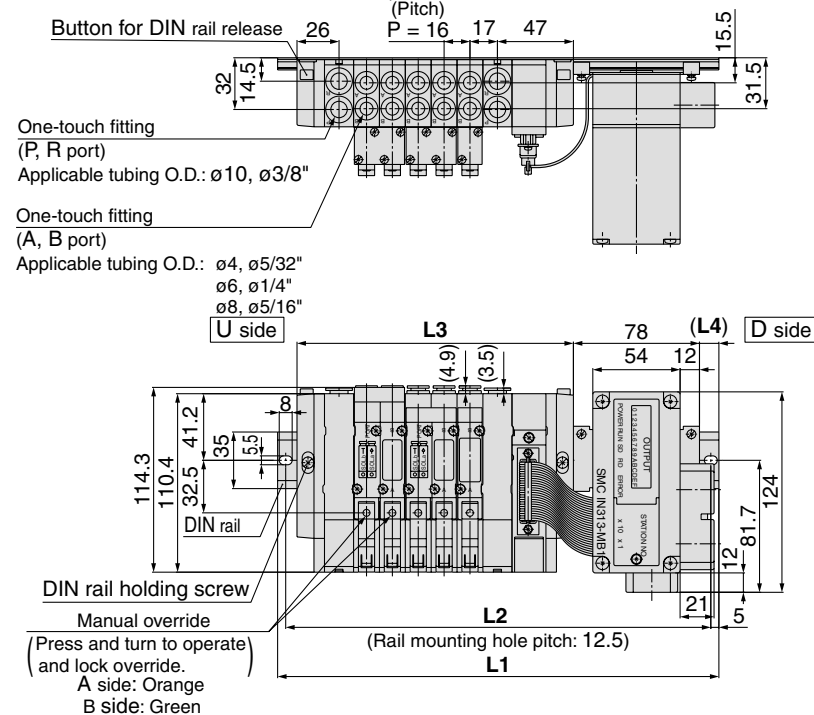
Note) The L1 to L4 dimensions of SS5Y3-45S2D-

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 are identical to 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 |

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



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.

| 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 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 | |

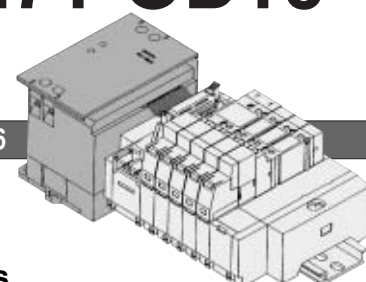
* In the case of mixed specifications, indicate separately on the manifold specification sheet.

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

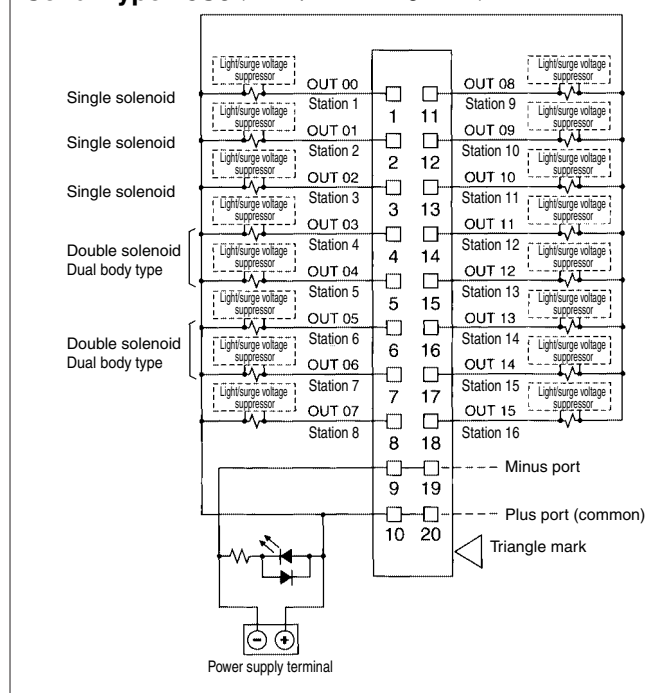
| | |
|---|--------|
| 5 | 24 VDC |
|---|--------|

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)



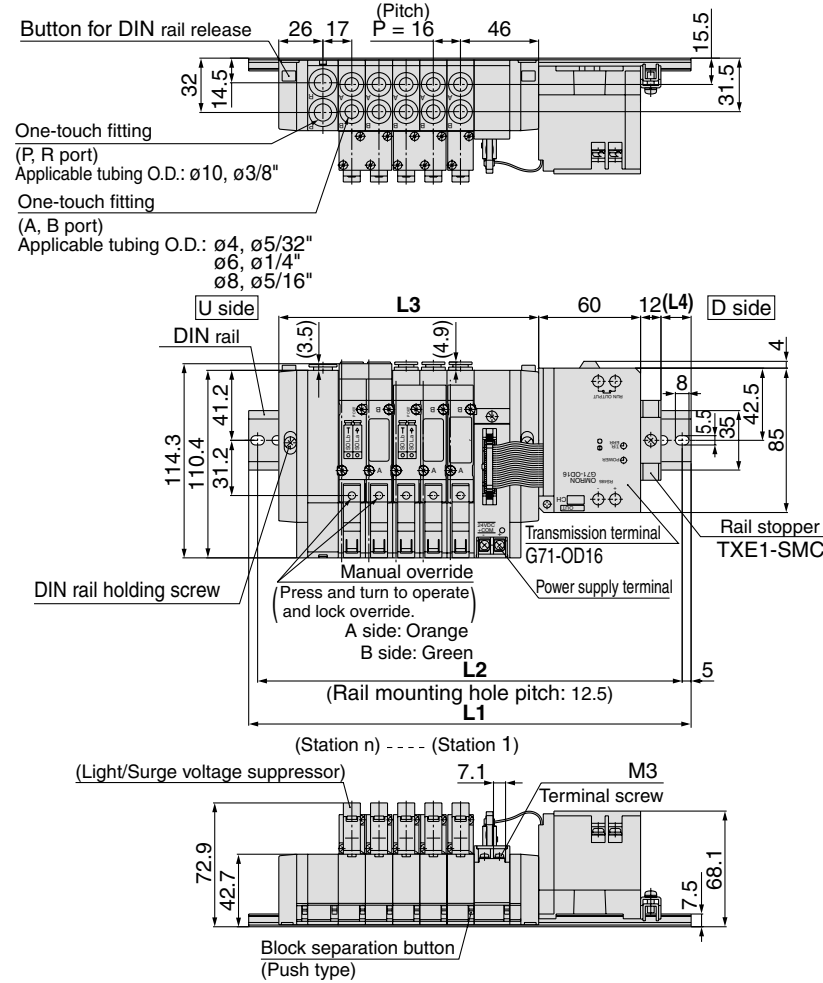
- For specifications on OMRON Corp's transmitter terminals, refer to the instruction manual or the catalog of transmitter terminals, etc.
- Max. 16 solenoids are applicable. Please consult with SMC for more solenoids.

Caution

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

SY5000: Serial Transmission Unit/Plug-in

SS5Y5-45S3D- Stations U-C4, N3 C6, N7 C8, N9



Note) The L1 to L4 dimensions of SS5Y5-45S3D-

Stations D- C4, N3
C6, N7, SS5Y5-45S3U- Stations D- C4, N3
C8, N9 C6, N7 are identical
to those of SS5Y5-45S3D- Stations U- C4, N3
C6, N7, C8, N9

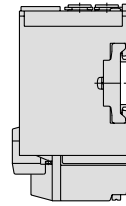
SV

SZ

SY

SYJ

SX



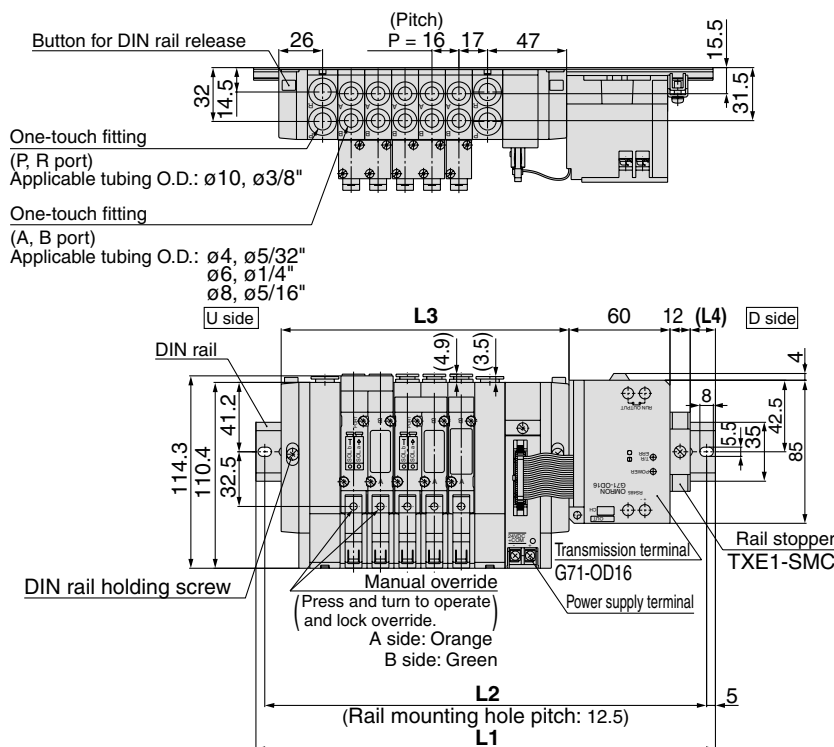
| Stations n | 2 stations | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 stations |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| L1 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 298 | 323 | 335.5 |
| L2 | 200 | 212.5 | 225 | 250 | 262.5 | 275 | 287.5 | 312.5 | 325 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| L4 | 16.5 | 15 | 13 | 17.5 | 16 | 14 | 12.5 | 17 | 15 |



Note) The L1 to L4 dimensions of SS5Y5-

45S3U- Stations B- C4, N3
C6, N7 are identical to
those of SS5Y5-45S3D- Stations B- C4, N3
C6, N7, C8, N9

SS5Y5-45S3D- Stations B-C4, N3 C6, N7 C8, N9



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

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

Made to Order Specifications: Series SY3000/5000

Type **45**

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.

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 | 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 |

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)

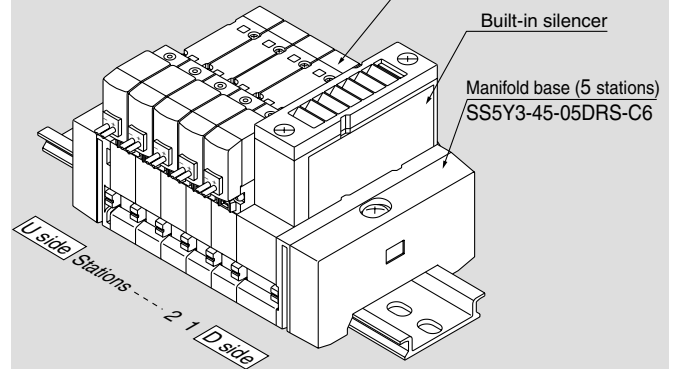
| Symbol | Port size | Applicable series |
|--------|------------------------------|-------------------|
| N3 | One-touch fitting for ø5/32" | SY3000 |
| N7 | One-touch fitting for ø1/4" | |
| M | Mixed | |
| N3 | One-touch fitting for ø5/32" | SY5000 |
| N7 | One-touch fitting for ø1/4" | |
| N9 | One-touch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

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 <input type="checkbox"/> | 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 wiring 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 |

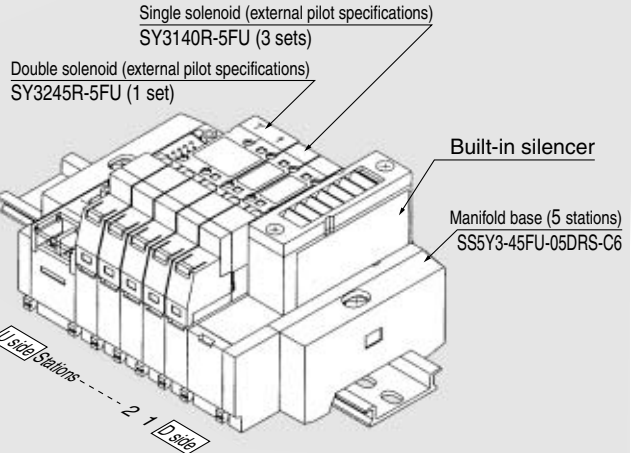
No symbol is used for T, T1, S types.

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

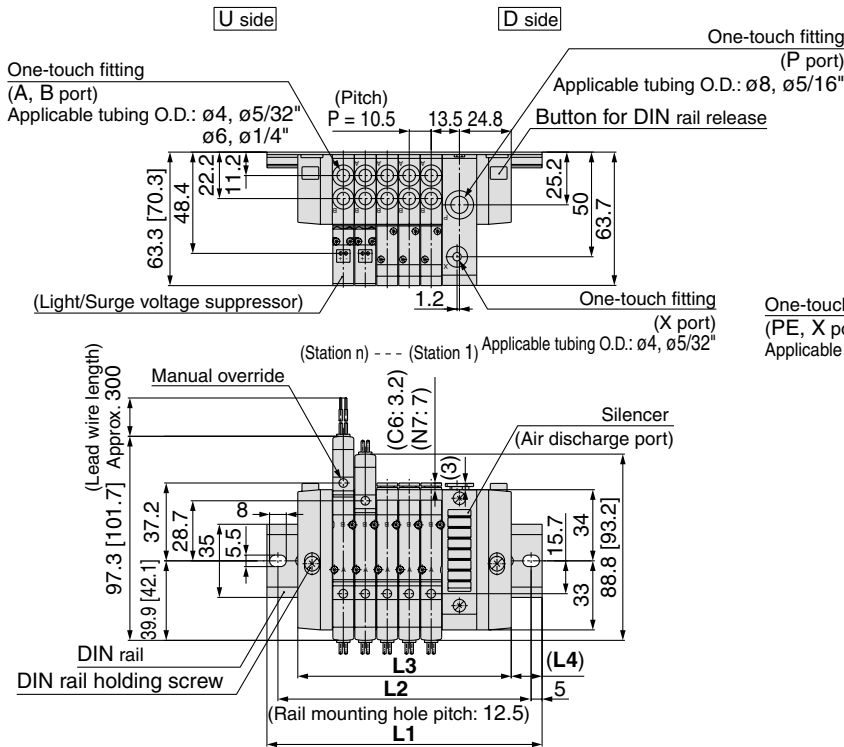
| | |
|-----|--------------------------------|
| Nil | Non-locking push type |
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |

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

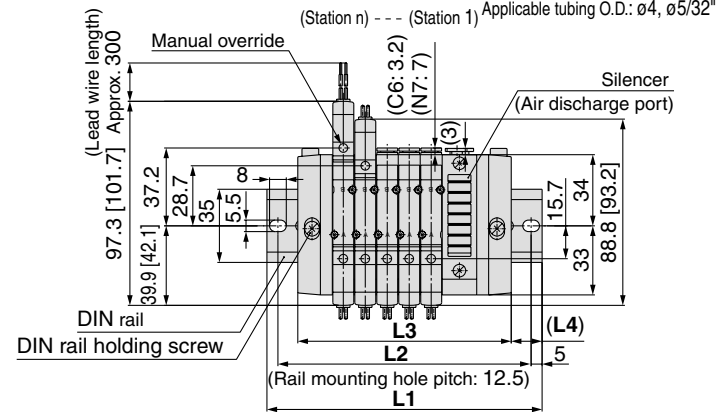
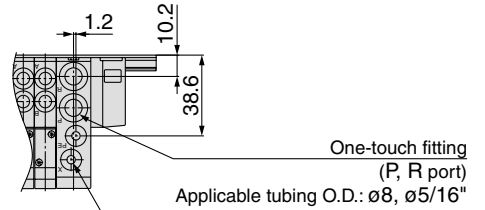
External Pilot/Built-in Silencer



SY3000: SS5Y3-45- Stations DRS-^{C4, N3}_{C6, N7}

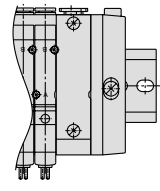


SS5Y3-45- Stations DR-^{C4, N3}_{C6, N7}



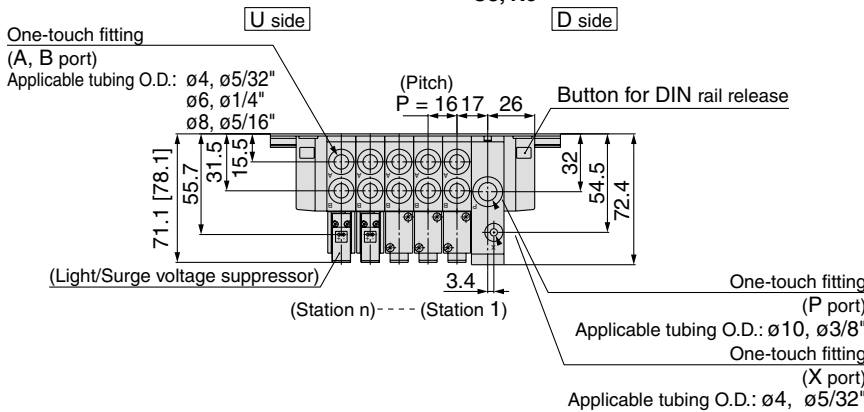
One-touch fitting (PE, X port)
Applicable tubing O.D.: ø4, ø5/32"

- SV
- SZ
- SY**
- SYJ
- SX

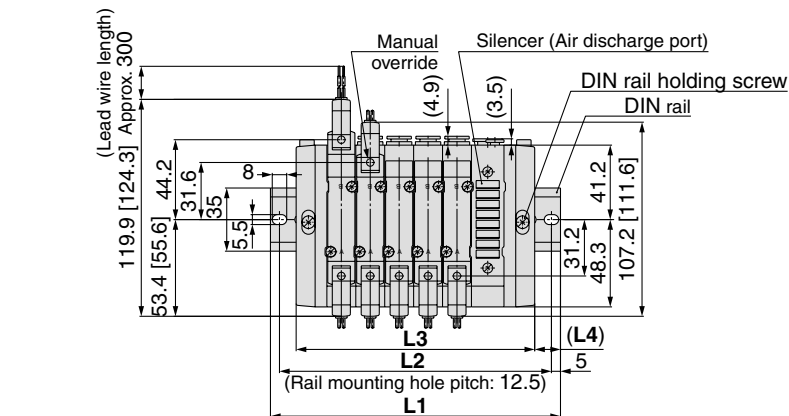
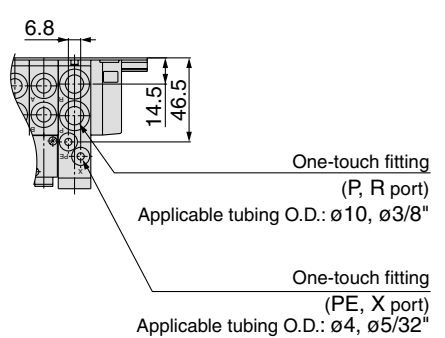


* The dimensions L1 to L4 are identical to those of SS5Y3-45- Stations ^U_D ^{C4, N3}_{C6, N7}.

**SY5000: SS5Y5-45- Stations DRS-^{C4, N3}_{C6, N7}
^{C8, N9}**



**SS5Y5-45- Stations DR-^{C4, N3}_{C6, N7}
^{C8, N9}**

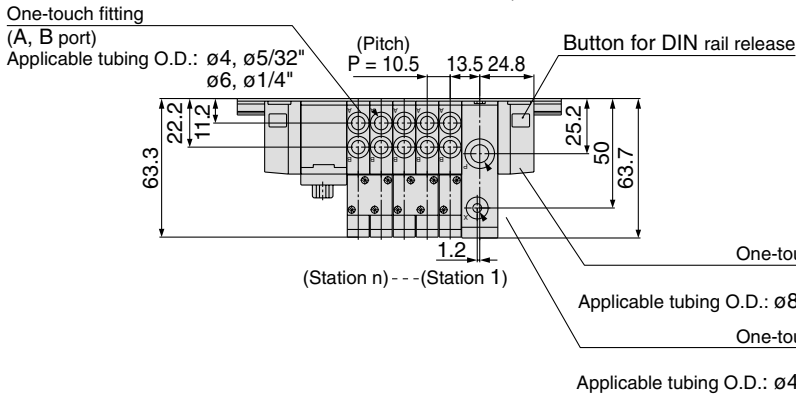


* The dimensions L1 to L4 are identical to those of SS5Y3-45- Stations ^U_D ^{C4, N3}_{C6, N7}
^{C8, N9.}

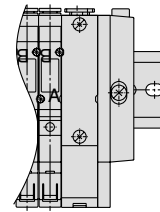
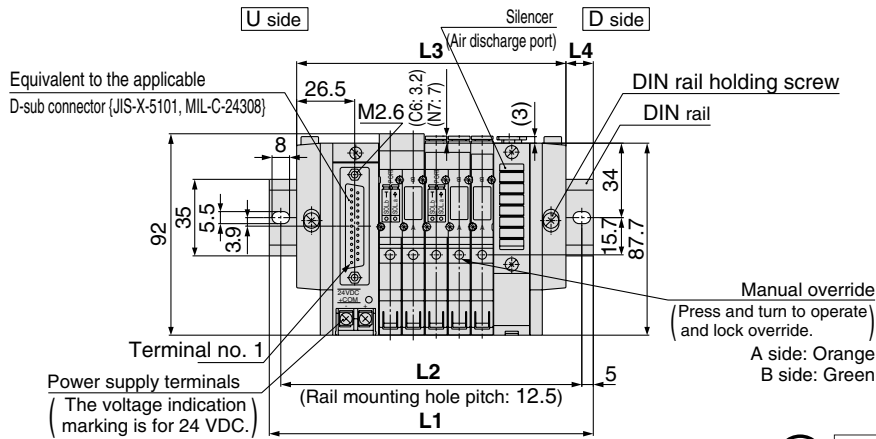
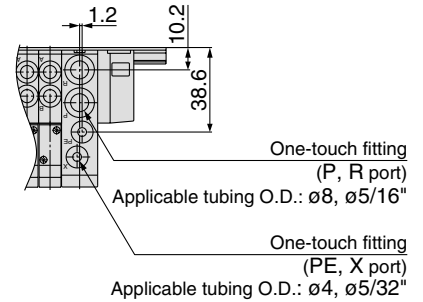
* The dimensions of SS5Y³₅-45- Stations URS are identical to those of SS5Y³₅-45F- Stations DRS.

External Pilot/Built-in Silencer

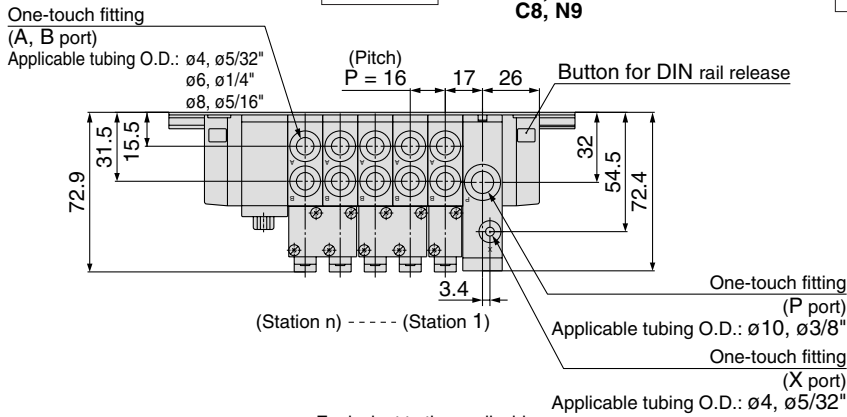
**SY3000: SS5Y3-45FU- Stations DRS- C4, N3
C6, N7**



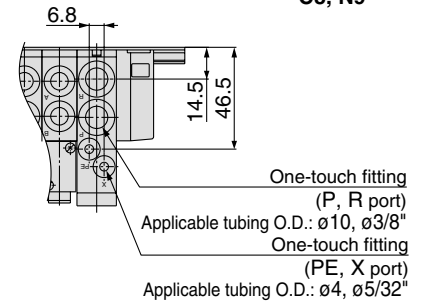
**SS5Y3-45FU- Stations DR- C4, N3
C6, N7**



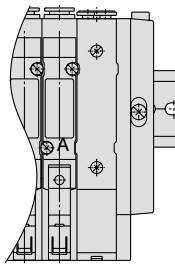
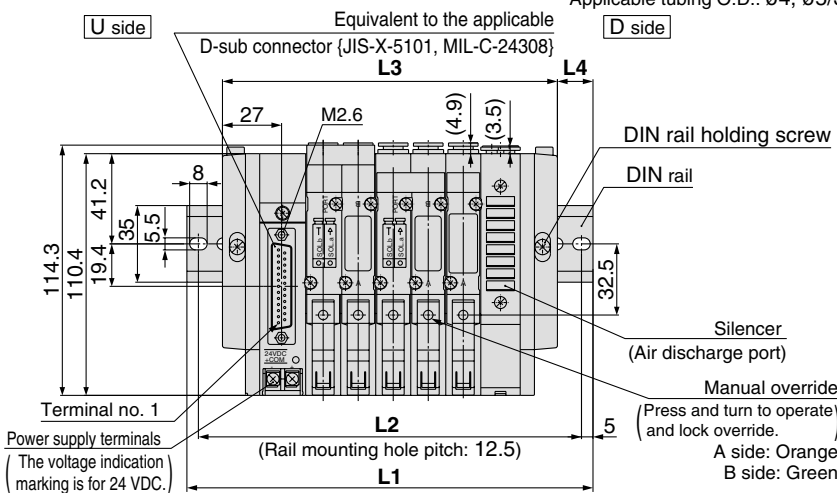
**SY5000: SS5Y5-45FU- Stations DRS- C4, N3
C6, N7
C8, N9**



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



* The dimensions L1 to L4 are identical to those of SS5Y3-45FU- Stations DRS.



* The dimensions L1 to L4 are identical to those of SS5Y3-45FU- Stations DRS.

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

Made to Order Specifications: Series SY3000/5000 Mixed Mounting

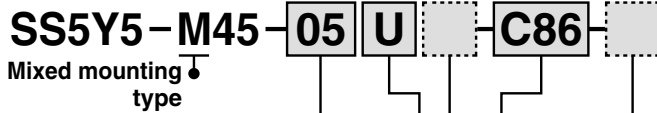
Type **M45**

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)



Valve stations

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

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

* 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 $\phi 4$ SY3000: One-touch fitting for $\phi 4$ |
| C46 | SY5000: One-touch fitting for $\phi 4$ SY3000: One-touch fitting for $\phi 6$ |
| C64 | SY5000: One-touch fitting for $\phi 6$ SY3000: One-touch fitting for $\phi 4$ |
| C66 | SY5000: One-touch fitting for $\phi 6$ SY3000: One-touch fitting for $\phi 6$ |
| C84 | SY5000: One-touch fitting for $\phi 8$ SY3000: One-touch fitting for $\phi 4$ |
| C86 | SY5000: One-touch fitting for $\phi 8$ SY3000: One-touch fitting for $\phi 6$ |
| M | Mixed |

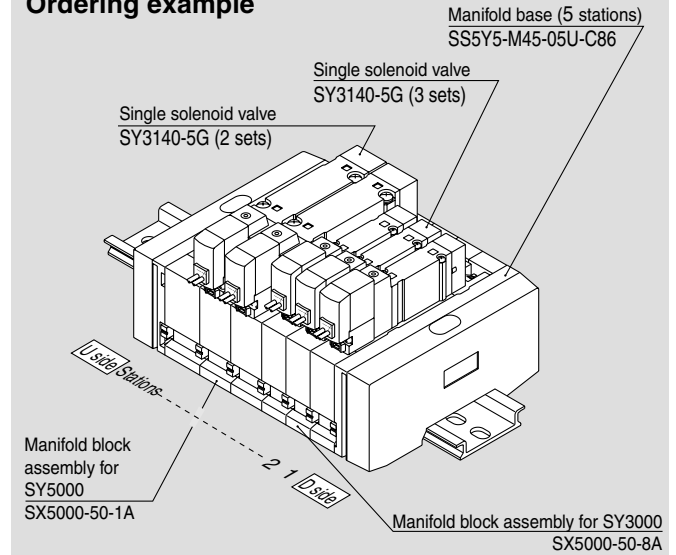
One-touch fitting (Inch size)

| Symbol | Port size |
|--------|--------------------------------------------------------------------------------------------|
| N33 | SY5000: One-touch fitting for $\phi 5/32$ " SY3000: One-touch fitting for $\phi 5/32$ " |
| N37 | SY5000: One-touch fitting for $\phi 5/32$ " SY3000: One-touch fitting for $\phi 1/4$ " |
| N73 | SY5000: One-touch fitting for $\phi 1/4$ " SY3000: One-touch fitting for $\phi 5/32$ " |
| N77 | SY5000: One-touch fitting for $\phi 1/4$ " SY3000: One-touch fitting for $\phi 1/4$ " |
| N93 | SY5000: One-touch fitting for $\phi 3/16$ " SY3000: One-touch fitting for $\phi 5/32$ " |
| N97 | SY5000: One-touch fitting for $\phi 3/16$ " SY3000: One-touch fitting for $\phi 1/4$ " |
| 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



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.

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.

Manual override

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

Electrical entry

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

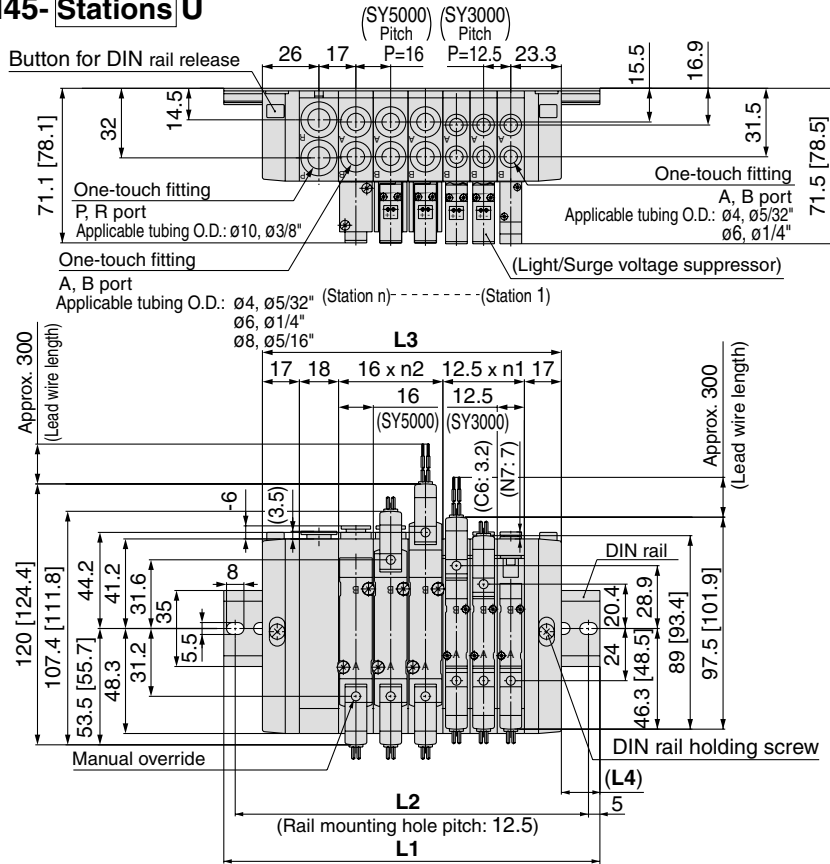
* "LN", "MN" type: with 2 sockets.
* For connector cable of M8 connector, refer to page 1-4-209.

| DC | | Rated voltage | |
|----|--------|---------------|-------------------|
| 5 | 24 VDC | 1 | 100 VAC |
| 6 | 12 VDC | 2 | 200 VAC |
| V | 6 VDC | 3 | 110 VAC [115 VAC] |
| S | 5 VDC | 4 | 220 VAC [230 VAC] |
| R | 3 VDC | | |

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

Dimensions: Mixed Mounting

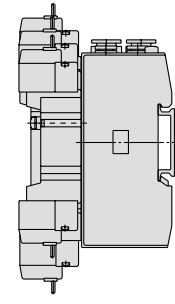
SS5Y5-M45- Stations U



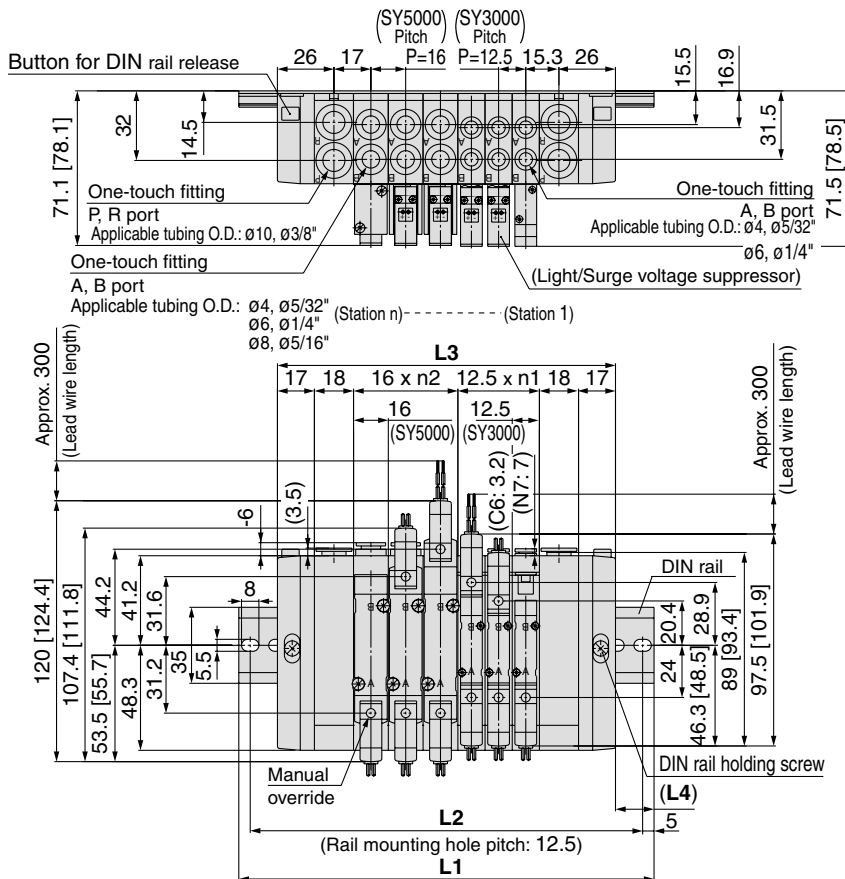
L dimension: Formulae for L1, L4
 $L3 = 12.5 \times n1 + 16 \times n2 + 52$
 $M = (\frac{L3}{12.5} + 1)$ Omit decimals
 $L1 = 12.5 \times M + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3) / 2$

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
 $L3 = 12.5 \times n1 + 16 \times n2 + 70$
 $M = (\frac{L3}{12.5} + 1)$ Omit decimals
 $L1 = 12.5 \times M + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3) / 2$

n1 = Number of SY3000
 n2 = Number of SY5000

