How to Order Manifold

**SS5Y**

**Ordering example (SY3000, +COM, U side)**

### Valve Manifold Assembly

#### Ordering example (SY3000, +COM, U side)

- Double solenoid (24 VDC)
  - SY3240-SLOU (2 sets)
- Single solenoid (24 VDC)
  - SY3140-SLOU (2 sets)
- Cylinder port size
  - CE With One-touch fitting for ø6

**Manifold base**

SSSY3-45-AU-05D-C6

**Blanking plate assembly**

SX3000-75-1A

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.

**SS5Y** - 45-A - 

/L50132/L50132

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.

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### How to Order Valves

**SY**

**Manual override**

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

### Type of actuation

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

### Rated voltage

- 5: 24 VDC
Manifold Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>SS5Y3-45-4</th>
<th>SS5Y5-45-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manifold type</td>
<td>Stacking type/DIN rail mounted</td>
<td>Stacking type/DIN rail mounted</td>
</tr>
<tr>
<td>P (SUP)/R (EXH)</td>
<td>Common SUP, Common EXH</td>
<td>Common SUP, Common EXH</td>
</tr>
<tr>
<td>Valve stations</td>
<td>2 to 16 stations (Note 1, 2)</td>
<td>2 to 16 stations (Note 1, 2)</td>
</tr>
<tr>
<td>Porting specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>C8 (One-touch fitting for ø8)</td>
<td>C10 (One-touch fitting for ø10)</td>
</tr>
<tr>
<td>A, B port</td>
<td>C4 (One-touch fitting for ø4)</td>
<td>C4 (One-touch fitting for ø4)</td>
</tr>
<tr>
<td></td>
<td>C6 (One-touch fitting for ø6)</td>
<td>C8 (One-touch fitting for ø8)</td>
</tr>
<tr>
<td>Manifold base weight W (g)</td>
<td>2 to 10 stations: W = 26n + 207</td>
<td>2 to 10 stations: W = 52n + 245</td>
</tr>
<tr>
<td></td>
<td>11 to 20 stations: W = 26n + 229</td>
<td>11 to 16 stations: W = 52n + 279</td>
</tr>
<tr>
<td>Applicable flat ribbon cable connector</td>
<td>Flat ribbon cable connector Socket: 20 pins MIL type with strain relief conforming to MIL-C-83503</td>
<td></td>
</tr>
<tr>
<td>Wiring specifications</td>
<td>+COM specifications (Type 45-A), –COM specifications (Type 45-NA)</td>
<td></td>
</tr>
</tbody>
</table>

**Flow Characteristics**

<table>
<thead>
<tr>
<th>Model</th>
<th>Port size</th>
<th>Flow characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1, 5, 3 (P, EA, EB)</td>
</tr>
<tr>
<td></td>
<td>C8</td>
<td>C6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C10</td>
<td>C8</td>
</tr>
</tbody>
</table>

**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**
  - Connector box
  - (Wiring example)
  - Station 1
  - Station 2
  - Station 3
  - Station 4
  - Station 5

- **–COM electric circuit diagram**
  - Connector box
  - (Wiring example)
  - Station 1
  - Station 2
  - Station 3
  - Station 4
  - Station 5

- **Reference layout**
  - U side
  - D side
  - SoL A
  - SoL B

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

- **Individual SUP spacer assembly**
- **Individual EXH spacer assembly**

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

**EXH block disk**
By installing an EXH block disk in the exhaust passage of a manifold, 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.)

**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)

**Silencer with One-touch fitting**
The silencer plugs directly into the One-touch fittings of the manifold.

**Blanking plate assembly**

**Cable assembly**

**AXT100-FC20-1**

**Connector Assembly for Flat Ribbon Cable**

**Dimensions**

**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.
How to Order Interface regulator (SY3000, 5000 only)

Series SY3000

**ARBY3000-05-P-2**

- **Regulating port**
  - P port
  - A1: A port (P controlled type, A port regulation)
  - B1: B port (P controlled type, B port regulation)

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

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

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

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

**ARBY3000-M1-□-2**

Series SY5000

**ARBY5000-00-P-2**

- **Regulating port**
  - 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)

**ARBY5000-00-□-2**

**ARBY5000-M1-□-2**

Accessory

<table>
<thead>
<tr>
<th>Series</th>
<th>Round head combination screw</th>
<th>Gasket</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARBY3000</td>
<td>SY3000-23-10 (M2 x 36)</td>
<td>SX3000-57-4</td>
</tr>
<tr>
<td>ARBY5000</td>
<td>SX5000-57-6</td>
<td></td>
</tr>
</tbody>
</table>

Caution

Mounting screw tightening torques
- M2: 0.16 N·m
- M3: 0.8 N·m
Dimensions: Series SY3000

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

One-touch fitting
A, B port
Applicable tubing O.D.: ø4, ø5/32" ø6, ø1/4"

(Pitch)
P = 10.5 13.5 24.8

Button for DIN rail release

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

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

One-touch fitting
P, R port
Applicable tubing O.D.: ø8, ø5/16"

(Pitch)
P = 10.5 13.5 24.8

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

With interface regulator (with gauge)

- Two SUP/EXH blocks are provided for models with 11 stations or more.
Replacement Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manifold block assembly</td>
<td>SX3000-50-1A-</td>
<td>SX5000-50-1A-</td>
</tr>
<tr>
<td>2</td>
<td>SUP/EXH block assembly</td>
<td>SX3000-51-1A</td>
<td>SX5000-51-1A</td>
</tr>
<tr>
<td>3</td>
<td>End block assembly R</td>
<td>SX3000-52-1A</td>
<td>SX5000-52-1A</td>
</tr>
<tr>
<td>4</td>
<td>End block assembly L</td>
<td>SX3000-53-1A</td>
<td>SX5000-53-1A</td>
</tr>
<tr>
<td>5</td>
<td>Connector box</td>
<td>VZ3000-106-1A</td>
<td>For 24 VDC only</td>
</tr>
<tr>
<td>6</td>
<td>Rail stopper</td>
<td>TXE1-SMC</td>
<td>Made by Kasuga Electric Works, Ltd.</td>
</tr>
<tr>
<td>7</td>
<td>Connector assembly</td>
<td>SY3000-43-1A-</td>
<td>SY3000-43-2A-</td>
</tr>
<tr>
<td></td>
<td>SY3000-43-2A-</td>
<td>SY3000-43-3A-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SY3000-43-1NA-</td>
<td>SY3000-43-2NA-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SY3000-43-2NA-</td>
<td>SY3000-43-3NA-</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Dust cap</td>
<td>VZ3000-63-2</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Round head combination screw</td>
<td>SY3000-23-4</td>
<td>M3 x 26, Matt nickel plated</td>
</tr>
<tr>
<td>10</td>
<td>Gasket</td>
<td>SX3000-57-4</td>
<td>SX5000-57-6</td>
</tr>
<tr>
<td>11</td>
<td>DIN rail</td>
<td>VZ1000-11-1-</td>
<td>Refer to page 1-4-123.</td>
</tr>
</tbody>
</table>
**How to Increase Manifold Base**

1. Loosen bolt \( \mathbb{B} \) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons \( \mathbb{C} \), at two locations, separate the manifold base from the DIN rail.)

2. Press manifold block assembly dividing button \( \mathbb{B} \), that are at the location where manifold bases are to be added, until button \( \mathbb{B} \) 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 \( \mathbb{A} \) 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 \( \mathbb{D} \) to demount the connector box from the DIN rail, and when remounting it, tighten the bolt while pressing it against the rail.

**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**

<table>
<thead>
<tr>
<th>Model</th>
<th>One-touch fitting for Ø4</th>
<th>VVQ1000-50A-C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY3000</td>
<td>One-touch fitting for Ø6</td>
<td>VVQ1000-50A-C6</td>
</tr>
<tr>
<td>SY5000</td>
<td>One-touch fitting for Ø4</td>
<td>VVQ1000-51A-C4</td>
</tr>
<tr>
<td></td>
<td>One-touch fitting for Ø8</td>
<td>VVQ1000-51A-C8</td>
</tr>
</tbody>
</table>

**Inch size**

<table>
<thead>
<tr>
<th>Model</th>
<th>One-touch fitting for ( \frac{5}{16})&quot;</th>
<th>VVQ1000-50A-N3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY3000</td>
<td>One-touch fitting for ( \frac{1}{4})&quot;</td>
<td>VVQ1000-50A-N7</td>
</tr>
<tr>
<td>SY5000</td>
<td>One-touch fitting for ( \frac{5}{16})&quot;</td>
<td>VVQ1000-51A-N3</td>
</tr>
<tr>
<td></td>
<td>One-touch fitting for ( \frac{1}{2})&quot;</td>
<td>VVQ1000-51A-N7</td>
</tr>
<tr>
<td></td>
<td>One-touch fitting for ( \frac{5}{16})&quot;</td>
<td>VVQ1000-51A-N9</td>
</tr>
</tbody>
</table>

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.