**Series VQ1000**

**Body Ported**

**Plug Lead Unit: Cassette Type**

### How to Order Manifold

![Manifold Diagram]

**VV5Q1**

**7**

**08**

**F U1 D**

**Series VQ1000**

**Manifold**

**Simple specials are available with SMC Simple Specials System. For details about applicable models, please contact SMC.**

**Stations**

- **01** 1 station

**Option**

- **D** (1) DIN rail mounting style
- **K** (2) Special wiring specifications (Except double wiring)
- **N** (3) With name plate

**Note 1)** Since the manifold is all with DIN rail, and so suffix -D to the part number.

**Note 2)** Specify the wiring specifications on the manifold specification sheet. (Except C kit)

**Note 3)** Unmountable when the valve’s manual override is a locking lever type.

**Note 4)** When two or more symbols are specified, indicate them alphabetically.

### Kit/Electrical entry/Cable length

#### F kit

- **(D-sub connector)**
- **Top entry**
- **Side entry**

#### P kit

- **(Flat ribbon cable connector)**
- **Top entry**
- **Side entry**

#### T kit

- **(Terminal block)**

#### C kit

- **(Connector)**

#### S kit

- **(Serial transmission unit)**

---

**Connector entry direction**

<table>
<thead>
<tr>
<th>Kit</th>
<th>Top entry</th>
<th>Side entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0</td>
<td>Without cable</td>
<td></td>
</tr>
<tr>
<td>U1</td>
<td>With cable (1.5 m)</td>
<td>Max. 16 stations</td>
</tr>
<tr>
<td>U2</td>
<td>With cable (3 m)</td>
<td></td>
</tr>
<tr>
<td>U3</td>
<td>With cable (5 m)</td>
<td></td>
</tr>
</tbody>
</table>

**Connector entry direction**

<table>
<thead>
<tr>
<th>Kit</th>
<th>Top entry</th>
<th>Side entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>S0</td>
<td>Without cable</td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>With cable (1.5 m)</td>
<td>Max. 16 stations</td>
</tr>
<tr>
<td>S2</td>
<td>With cable (3 m)</td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>With cable (5 m)</td>
<td></td>
</tr>
</tbody>
</table>

---

**Applicable stations 1 to 8**

**No. of terminals: 8, 1 row**

**Applicable stations 5 to 16**

**No. of terminals: 16, 2 rows**

**Max. 16 stations**

---

**Note 1)** Besides the above, F and P kits with different number of pins are available. For details, refer to page 2-4-92.

**Note 2)** See page 2-4-93 for details.

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**For details about certified products conforming to international standards, visit us at www.smcworld.com.**

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**P. 2-4-81**

**P. 2-4-82**

**P. 2-4-83**

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**P. 2-4-74**

**P. 2-4-76**

**P. 2-4-78**

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**P. 2-4-70**

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**P. 2-4-72**
How to Order Valves

### Manifold Option

**Series VQ1000**

**Type of actuation**

1. 2 position single
2. 2 position double (Latching)
3. 3 position closed center
4. 3 position exhaust center
5. 3 position pressure center

**Function**

- **Coil voltage**
  - 1: 100 VAC (50/60 Hz)
  - 2: 200 VAC (50/60 Hz)
  - 3: 380 VAC (50/60 Hz)
  - 4: 500 VAC (50/60 Hz)
  - 5: 24 VDC
  - 6: 12 VDC

- **Seal**
  - 0: Metal seal
  - 1: Rubber seal

**Note 1)** For negative common specifications, refer to Option* on page 2-4-93.

**Note 2)** Except double (latching).

**Coil voltage**

- 1: 100 VAC (50/60 Hz)
- 2: 200 VAC (50/60 Hz)
- 3: 380 VAC (50/60 Hz)
- 4: 500 VAC (50/60 Hz)
- 5: 24 VDC
- 6: 12 VDC

**Manual override**

- A: Non-locking push button (Tool required)
- B: Locking type (Manual)

**Electrical entry**

- G: Grommet type (Manual)
- L: L plug connector With lead wire
- M: M plug connector Without lead wire
- MO: M plug connector Without lead wire

**Seal**

- 0: Metal seal
- 1: Rubber seal

**Note 1)** For negative common specifications, refer to Option* on page 2-4-93.

**Note 2)** Except double (latching).

**Type of actuation**

1. 2 position single
2. 2 position double (Latching)
3. 3 position closed center
4. 3 position exhaust center
5. 3 position pressure center

**Function**

- **Coil voltage**
  - 1: 100 VAC (50/60 Hz)
  - 2: 200 VAC (50/60 Hz)
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  - 6: 12 VDC

- **Seal**
  - 0: Metal seal
  - 1: Rubber seal

**Note 1)** For negative common specifications, refer to Option* on page 2-4-93.

**Note 2)** Except double (latching).

**Coil voltage**

- 1: 100 VAC (50/60 Hz)
- 2: 200 VAC (50/60 Hz)
- 3: 380 VAC (50/60 Hz)
- 4: 500 VAC (50/60 Hz)
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- 6: 12 VDC

**Manual override**

- A: Non-locking push button (Tool required)
- B: Locking type (Manual)

**Electrical entry**

- G: Grommet type (Manual)
- L: L plug connector With lead wire
- M: M plug connector Without lead wire
- MO: M plug connector Without lead wire

**Seal**

- 0: Metal seal
- 1: Rubber seal

**Note 1)** For negative common specifications, refer to Option* on page 2-4-93.

**Note 2)** Except double (latching).
## Manifold Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Type of connection</th>
<th>Porting specifications</th>
<th>Applicable stations</th>
<th>Applicable solenoid valve</th>
<th>5 station weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ1000</td>
<td>VV5Q17□□□-D</td>
<td>F kit–D-sub connector</td>
<td>Top C6 (ø6)</td>
<td>1 to 16 stations</td>
<td>VQ1□□70 VQ1□□71</td>
<td>405</td>
</tr>
</tbody>
</table>

### Note

1) Inch-size One-touch fittings are also available. For details, refer to page 2-4-93.

2) For details, refer to page 2-4-93.
It is a standard terminal block type.

Two quantities of terminals can be selected in accordance with the number of stations.

(8 terminals/16 terminals)

Maximum stations are 16.

Electrical wiring specifications

Manifold Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Porting specifications</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ1000</td>
<td>Top C6 C3, C4, C6, M5</td>
<td>Max. 16 stations</td>
</tr>
</tbody>
</table>

How to connect wires to terminal block

Open the terminal block cover to connect the wires to the terminal block.

(With M3 thread)

How to Order Manifold

DIN rail mounting style

Special wiring specifications (Except double wiring)

With name plate

Note 1) Since the manifold is all with DIN rail, and so suffix -D to the part number.

Note 2) Specify the wiring specifications in the manifold specification sheet.

Note 3) Unmountable when the valve’s manual override is a locking lever type.

Note 4) When two or more symbols are specified, indicate them alphabetically.

Number of terminals

1. 8 terminals in 1 row
2. 16 terminals in 2 rows

Note) The number of terminal blocks can be chosen regardless of station qty. Suffix the option symbol, K, when the wiring specification is special.
Body Ported

Plug Lead Unit: Cassette Type Series VQ1000

Dimensions

Formula: L1 = 10.5n + 24, L2 = 10.5n + 44

<table>
<thead>
<tr>
<th>n</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>L4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>34.5</td>
<td>45</td>
<td>55.5</td>
<td>66</td>
</tr>
<tr>
<td>2</td>
<td>54.5</td>
<td>65</td>
<td>75.5</td>
<td>86</td>
</tr>
<tr>
<td>3</td>
<td>125</td>
<td>137.5</td>
<td>150</td>
<td>162.5</td>
</tr>
<tr>
<td>4</td>
<td>150</td>
<td>160.5</td>
<td>175</td>
<td>187.5</td>
</tr>
<tr>
<td>5</td>
<td>200</td>
<td>205</td>
<td>220</td>
<td>232.5</td>
</tr>
<tr>
<td>6</td>
<td>225</td>
<td>230.5</td>
<td>250</td>
<td>262.5</td>
</tr>
<tr>
<td>7</td>
<td>250</td>
<td>255.5</td>
<td>275</td>
<td>287.5</td>
</tr>
<tr>
<td>8</td>
<td>275</td>
<td>280.5</td>
<td>300</td>
<td>312.5</td>
</tr>
<tr>
<td>9</td>
<td>300</td>
<td>305</td>
<td>325</td>
<td>337.5</td>
</tr>
<tr>
<td>10</td>
<td>325</td>
<td>330.5</td>
<td>350</td>
<td>362.5</td>
</tr>
<tr>
<td>11</td>
<td>350</td>
<td>355</td>
<td>375</td>
<td>387.5</td>
</tr>
<tr>
<td>12</td>
<td>375</td>
<td>380.5</td>
<td>400</td>
<td>412.5</td>
</tr>
</tbody>
</table>

How to Order Valves

Series VQ1000

<table>
<thead>
<tr>
<th>Type of actuation</th>
<th>Seal</th>
<th>Function</th>
<th>Coil voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>DC</td>
<td>100 VAC (50/60 Hz)</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Standard type</td>
<td>100 VAC (50/60 Hz)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>High pressure type</td>
<td>100 VAC (50/60 Hz)</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Low voltage type</td>
<td>100 VAC (50/60 Hz)</td>
</tr>
</tbody>
</table>

Note 1) L type plug connector is used for 3 position AC.
Note 2) For negative common specifications, refer to "Option" on page 2-4-93.

Note 1) L type plug connector is used for 3 position AC.
Note 2) Except double (latching).

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Connector kit
VVS0170-OBT2-D ... 1 set-Manifold base part no.
VQ1170-SMO-C6 ... 4 sets-Valve part no. (Stations 1 to 4)
VQ1270-SMOB-C6 ... 4 sets-Valve part no. (Stations 5 to 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Enter in order starting from the first station on the D side. Besides, when the arrangement will be complicated, fill out the Manifold Specification Sheet to instruct us.

Note 1) L type plug connector is used for 3 position AC.
Note 2) Except double (latching).

Note 1) For power consumption of AC type, refer to page 2-4-74.
Note 2) For negative common specifications, refer to "Option" on page 2-4-93.

Note 1) The code is L for elbow piping for all manifold stations. Example) L6: Elbow with One-touch fittings for ø6

Note 2) For inch-size One-touch fittings, refer to "Option" on page 2-4-93.
Manifold Option Parts

Individual SUP spacer
VVQ1000-P-7-C6
When the same manifold is to be used for different pressures, individual SUP spacers are used as SUP ports for different pressures. (One station space is occupied.) Block both sides of the station, for which the supply pressure from the individual SUP spacer is used, with SUP block plates. (See the application ex.)
* Specify the spacer mounting position and SUP block plate mounting position on the manifold specification sheet. The block plate are used in two places for one set. (Two SUP block plates for blocking SUP station are attached to the individual SUP spacer.)
* The spacer’s specification can be changed (from an individual SUP spacer to an individual EXH spacer) by changing the coupling of the fittings and bushing.

Individual EXH spacer
VVQ1000-R-7-C6
When valve exhaust affects other stations due to the circuit configuration, this spacer is used for individual valve exhaust. (One station space is occupied.)
Block both sides of the individual valve EXH station.
* Specify the spacer mounting position and EXH block plate mounting position on the manifold specification sheet. The block plate are used in two places for one set. (Four EXH block plates for blocking EXH station are attached to the individual EXH spacer.)
* The spacer’s specification can be changed (from an individual EXH spacer to an individual SUP spacer) by changing the coupling of the fittings and bushing.

Individual SUP/EXH spacer
VVQ1000-PR-7-C6
This spacer has both functions of the above individual SUP and EXH spacers. (Refer to the application example.)
* Specify the spacer mounting position and SUP/EXH block plate mounting position on the manifold specification sheet. The block plates are used in two places for one set.
(A SUP/EXH block plates for blocking SUP/EXH station are attached to the individual SUP/EXH spacer.)
* When using the spacer not for individual SUP/EXH but for improving the ability to supply/exhaust air, it is unnecessary to block the SUP/EXH passage. In this case, place an order via VVQ1000-PRA-7-C6.
* The spacer’s specification can be changed by changing the coupling of the fittings and bushing.
Manifold Option Parts

SUP EXH Block bushing assembly
VVQ1000-87A-B-50

<For SUP>
When one manifold is to be used for different, high and low pressures, this block bushing assembly is used between the stations under a different pressure. The block assembly is mounted on the U side of the valve’s SUP passage.
* Specify the number stations on the manifold specification sheet.

<For EXH>
When a valve exhaust affects other stations due to the circuit configuration, this block bushing assembly is used between the stations whose EXH passages are to be separated each other. Since the block bushing assembly is mounted on the U side of the valve’s R1 and R2 passages, two assemblies are necessary for one station.
* Specify the number stations on the manifold specification sheet.

<Shut off label>
When using block bushing assembly for SUP, EXH passage, indication label for confirmation of the blocking position from outside is attached. (One label for each)

Elbow fitting assembly
VVQ1000-F7-L (C3, C4, C6)
It is used in a side-valve-port application.

Name plate [-N7]
VVQ1000-N7-Station (1 to Max. stations)
It is a transparent resin plate for placing a label that indicates solenoid valve function, etc. Insert it into the groove on the side of the end plate and bend it as shown in the figure. Open the face plate seating when the manual override is operating.
* It is not applicable to locking manual override.

Blanking plug
KQ2P-23-56
Used for unused cylinder port, SUP and EXH port. Purchasing order is available in units of 10 pieces.

Silencer
AN103-X233
This silencer is to be inserted into the EXH port (One-touch fittings) of the common exhaust type.

Port plug
VVQ0000-58A
The plug is used to block the cylinder port when using a 4 port valve as a 3 port valve.
When ordering it incorporated with a manifold, suffix A or B, the symbol of the plug port, to the valve no.
Example) VQ1170-5L-C6-A A port, Plug
Double check block (Separated type)  
**VQ1000-FPG-□**

It is used on the outlet side piping to keep the cylinder in the intermediate position for a long time. Combining the double check block with a built-in pilot type double check valve and a 3 position exhaust center solenoid valve will enable the cylinder to stop in the middle or maintain its position for a long time. The combination with a two position single/double solenoid valve will permit this block to be used for preventing the dropping at the cylinder stroke end when the SUP residual pressure is released.

### Specifications

- **Max. operating pressure**: 0.8 MPa
- **Min. operating pressure**: 0.15 MPa
- **Ambient and fluid temperature**: –5 to 50°C
- **Flow characteristics**: C
- **Max. operating frequency**: 180 CPM

### Dimensions

#### Single unit

<table>
<thead>
<tr>
<th>Dimension</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
<td>50</td>
<td>55</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>130</td>
<td>140</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>L3</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>130</td>
<td>140</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

#### Manifold

<table>
<thead>
<tr>
<th>Station</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>10</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>L2</td>
<td>50</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>L3</td>
<td>50</td>
<td>60</td>
<td>70</td>
</tr>
</tbody>
</table>

### How to Order

**Double check block**

**VQ1000-FPG-C4M5F**

**IN side port size**

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

**OUT side port size**

- M5: M5 thread
- C3: One-touch fitting for ø3.2
- C4: One-touch fitting for ø4
- C6: One-touch fitting for ø6

### Option

- **N**: None
- **F**: With bracket
- **D**: DIN rail mounting style (For manifold)
- **N**: Name plate

#### Bracket Assembly

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Tightening torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ1000-FPG-FB</td>
<td>0.22 to 0.25 N·m</td>
</tr>
</tbody>
</table>

### Caution

- **Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for a long time. Check the leakage using neutral household detergent, such as dish washing soap.**
- **Also check the cylinder’s tube gasket, piston packing and rod packing for air leakage.**
- **Since One-touch fittings allow slight air leakage, screw piping (with M5 thread) is recommended when stopping the cylinder in the middle for a long time.**
- **Combining double check block with 3 position closed center or pressure center solenoid valve will not work. M5 fitting assembly is attached, not incorporated into the double check block.**
- **After screwing in the M5 fittings, mount the assembly on the double check block. (Tightening torque: 0.8 to 1.2 N·m) If the exhaust of the double check block is throttled too much, the cylinder may not operate properly and may not stop immediately.**
- **Set the cylinder load so that the cylinder pressure will be within two times that of the supply pressure.**
Precautions

Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

Light/Surge Voltage Suppressor

**Caution**

The standard model is equipped with an indicator light and surge voltage suppressor. The lighting positions are concentrated on one side for both single solenoid type and double (latching) type. In the double (latching) type, A side and B side energization are indicated by two colors which match the colors of the manual overrides.

![DC circuit diagram](image)

**Note 1:**
- B-side energization: B light (green) illuminates.
- Equipped with a wiring error prevention (stop diode) mechanism.
- Surge absorption (ZNdiode) mechanism.

**Note 2:** Applicable to negative COM specification models.

**Double (Latching solenoid) Type**

**Caution**

Different from the conventional double solenoid, the double type uses a latching (self-holding system) solenoid. Although the appearance is the same as the single solenoid, it is constructed so that the movable iron core in the solenoid is held in the ON position on A and B sides by instantaneous energization (20 ms or more). The usage and function is the same as the double solenoid type.

**Special Cautions for Latching Solenoid:**

1. Select the circuit in which ON and OFF signals are not energized simultaneously.
2. 20 ms energization time is necessary for self-holding.
3. Avoid using the latching solenoid valves in environments where impact or collisions with the valve might occur.
4. Even though the armature in the solenoid of this valve is held on to the home position side (B side ON position), the electromagnetic valve channel is, A–(set): P → A, B → R, B–(reset): P → B, A → R, therefore, when the supply air is shut off or applied while leaving A side ON position, cylinder may be pulsated. The valve’s switching position when the supply air is operated should be installed on the home position side (B side ON position).
5. Manual override on the pilot valve side can retain its switching position after manipulation.
6. Please contact SMC for long-term energization applications.
7. In the case of metal seal type, if the supply air goes down below the minimum operating pressure (0.1 MPa or less), the main valve will be back to the home position (B side ON position). Therefore, when the supply air is shut off or applied while leaving A side ON position, cylinder may be pulsated. The valve’s switching position when the supply air is operated should be installed on the home position side (B side ON position).

**Warning**

Without an electric signal for the solenoid valve the manual override is used for switching the main valve.

- **Push type (Tool required)**
  - Push down on the manual override button with a small screwdriver until it stops. Release the screwdriver and the manual override will return.

- **Locking slotted type**
  - Push down on the manual override button with a small screwdriver. While down, turn clockwise by 90° to lock it. Turn it counterclockwise to release it.

- **Locking lever type (Option)**
  - Push down completely on the manual override button with a small screwdriver. While down, turn clockwise 90° to lock it. Turn it counterclockwise to release it.

- **Manual override for double (latching) type**
  - In case of a double (latching) type, a manual override is provided not only on the body side but to the pilot as a standard specification.
  - After manual operation, the main valve of the manual override on the body side returns to the position before the manual operation, however, the pilot valve manual override maintains the change-over position.
  - Turn before pushing.
  - Manual override body side

**Caution**

Do not apply excessive torque when turning the locking type manual override. (0.1 N·m or less)
**How to Mount/Remove Solenoid Valve**

**Caution**

<Procedure>

How to Remove
1. Loosen the clamp screw on one side.
2. Slightly slide a part of the valve stations on both sides of the station to be removed.
3. Pull up side (a) of the valve station and remove it from the DIN rail.

How to mount
1. Take procedures 1 and 2 above to make an open space in the position for mounting a new valve station.
2. Diagonally insert the clip on the side (b) of the valve station to the DIN rail.
3. Press down on the valve station and insert the clip on the side (a) of the valve station to the DIN rail.
4. Slide the valve stations together so that there is no clearance between them. Position the clamp screw and tighten. (Proper tightening torque: 0.7 to 1.0 N·m)

**Replacement of Cylinder Port Fittings**

**Caution**

The cylinder port fittings are a cassette for easy replacement. The fittings are blocked by a clip inserted from the side of the valve. Remove the clip with a screwdriver and remove fittings. For replacement, insert the fitting assembly until it strikes against the inside wall and then reinsert the clip to the specified position.

Applicable tubing O.D | Fitting assembly part no.
--- | ---
Applicable tubing ø3.2 | VVQ1000-50A-C3
Applicable tubing ø4 | VVQ1000-50A-C4
Applicable tubing ø6 | VVQ1000-50A-C6

* Purchasing order is available in units of 10 pieces.

**Caution**

1. Protect O-rings from scratches and dust to prevent air leakage.
2. The tightening torque for inserting fittings to the M5 thread ass’y should be 0.8 to 1.4 N·m.

**How to Use Plug Connector**

**Caution**

For details, refer to page 2-4-67.
Special Wiring Specifications

In the internal wiring of F kit, P kit, J kit, G kit, T kit and S kit, double wiring (connected to SOL. A and SOL. B) is adopted for each station regardless of the valve and option types. Mixed single and double wiring is available as an option.

1. How to order valves

Indicate an option symbol, -K, for the manifold no. and be sure to specify the mounting position and number of stations of the single and double wiring by means of the manifold specification sheet.

Example)
VV5Q17-09FU-D K S

Others, option symbols:
to be indicated alphabetically.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without shipping any terminal numbers.

3. Max. number of stations

The maximum number of stations depends upon the number of solenoids. Assuming one for a single and two for a double, determine the number of stations so that the total number is not more than the maximum number given in the following table.

<table>
<thead>
<tr>
<th>kit</th>
<th>F kit (D-sub connector)</th>
<th>P kit (Flat ribbon cable connector)</th>
<th>T kit (Terminal block)</th>
<th>S kit (Serial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>25P</td>
<td>15P</td>
<td>16 terminals</td>
<td></td>
</tr>
<tr>
<td>Max. points</td>
<td>14</td>
<td>14</td>
<td>8</td>
<td>16</td>
</tr>
</tbody>
</table>

Note) Due to the limitation of internal wiring.

Negative Common Specifications

Specify the valve model no. as shown below for negative COM specification. The standard manifold no. can be used. Please contact SMC for negative COM S kit.

How to order negative COM valves

VQ1170  N – 5MO – C6

Inch-size One-touch Fittings

Refer to following model no. for inch-size One-touch fittings.

How to order manifold

VV5Q17—08FSO—DN—00T

1(P), 3(R) port size ø1/4”

How to order valves

VQ1170 –5M— N7

Plug Connector Assembly Model

Connector assembly will be required when the F, P, T, S kits add a valve. Specify the valve and connector assembly.

Connector Assembly Part No.

Specifications | Part no.
---|---
Single (2-wire) | Positive common | AXT661-14A-F
Negative common | AXT661-14AN-F
Double (latching) (3-wire) | Positive common | AXT661-13A-F
Negative common | AXT661-13AN-F

Plug Rail Mounting

Each manifold can be mounted on a DIN rail. Order it by indicating an option symbol for DIN rail mounting style, -D. In this case, a DIN rail which is approx. 30 mm longer than the manifold with the specified number of stations is attached. Besides, it is also available in the following cases.

● When using DIN rail longer than the manifold with specified number of stations

Clearly indicate the necessary number of stations next to the option symbol, -D, for the manifold no.

Example)
VV5Q17-08FU1-D09S

● When ordering DIN rail only

DIN rail no.: AXT100-DR-n

Refer to the DIN rail dimension table for determining the length.

L Dimension

<table>
<thead>
<tr>
<th>No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>L Dimension</td>
<td>23</td>
<td>35.5</td>
<td>48</td>
<td>60.5</td>
<td>73</td>
<td>85.5</td>
<td>98</td>
<td>110.5</td>
<td>123</td>
<td>135.5</td>
</tr>
<tr>
<td>No.</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>L Dimension</td>
<td>112</td>
<td>125.5</td>
<td>138</td>
<td>150.5</td>
<td>163</td>
<td>175.5</td>
<td>188</td>
<td>200.5</td>
<td>213</td>
<td>225.5</td>
</tr>
<tr>
<td>No.</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>L Dimension</td>
<td>273</td>
<td>288.5</td>
<td>303.5</td>
<td>318.5</td>
<td>333.5</td>
<td>348</td>
<td>363.5</td>
<td>379</td>
<td>394.5</td>
<td>409.5</td>
</tr>
<tr>
<td>No.</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td>L Dimension</td>
<td>398</td>
<td>410.5</td>
<td>423</td>
<td>435.5</td>
<td>448</td>
<td>460.5</td>
<td>473</td>
<td>485.5</td>
<td>498</td>
<td>510.5</td>
</tr>
</tbody>
</table>
**Series VQ**

**VQ1000 (VV5Q17)/Plug Lead Unit, Cassette Type**

*(F, P, T, S kit)*

---

<table>
<thead>
<tr>
<th>Housing assembly and SI unit (3)</th>
<th>U side end plate assembly</th>
<th>Valve</th>
<th>D side end plate assembly</th>
</tr>
</thead>
</table>

---

*For how to increase the stations, refer to the instruction manual.*

---

### S kit

- **Connector assembly**
- **FU (Side entry)**
- **Note 1:** S kit is composed of a flat ribbon cable housing assembly (AXT100-2-PU20) of 1) SI unit and 2) P kit (20 pins).
- **Note 2:** Since no connector assembly is included, order it separately. (Refer to page 2-4-93.)
- **Note 3:** A housing assembly is not used for a C kit.
- **Note 4:** A DIN rail clamping bracket is attached to each.

---

### P kit

- **Connector assembly**
- **PU (Side entry)**

---

### F kit

- **Connector assembly**
- **FU (Side entry)**

---

### T kit

- **Note 1:** S kit is composed of a flat ribbon cable housing assembly (AXT100-2-PU20) of 1) SI unit and 2) P kit (20 pins).
- **Note 2:** Since no connector assembly is included, order it separately. (Refer to page 2-4-93.)
- **Note 3:** A housing assembly is not used for a C kit.
- **Note 4:** A DIN rail clamping bracket is attached to each.
<Housing Assembly and SI Unit>
Housing assembly and SI unit no.

<table>
<thead>
<tr>
<th>No.</th>
<th>Manifold</th>
<th>Part no.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SA kit)</td>
<td>EX321-S001(-XP)</td>
<td>General type SI unit (Series EX300)</td>
<td></td>
</tr>
<tr>
<td>(SB kit)</td>
<td>EX121-SMB1(-XP)</td>
<td>SI unit for MELSECNET/MINI-S3 Data Link System (Mitsubishi Electric Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SC kit)</td>
<td>EX121-STA1(-XP)</td>
<td>SI unit for SYSBUS Wire System (OMRON Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SD kit)</td>
<td>EX121-SSH1(-XP)</td>
<td>SI unit for Satellite I/O Link System (SHARP Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SE kit)</td>
<td>EX121-SPA1</td>
<td>SI unit for MEWNET-F System (Matsushita Electric Works Ltd.)</td>
<td></td>
</tr>
<tr>
<td>(SF1kit)</td>
<td>EX121-SUW1(-XP)</td>
<td>SI unit for 16 point Uni-wire System (NKE Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SH kit)</td>
<td>EX121-SUW1(-XP)</td>
<td>SI unit for Allen Bradley Remote I/O (RIO) System (Rockwell Automation, Inc.)</td>
<td></td>
</tr>
<tr>
<td>(SJ1 kit)</td>
<td>EX121-SSL1(-XP)</td>
<td>SI unit for 16 point Uni-wire H System (NKE Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SJ2 kit)</td>
<td>EX121-SSL2(-XP)</td>
<td>SI unit for 16 point S-LINK System (SUNX Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SK kit)</td>
<td>EX121-SFU1(-XP)</td>
<td>SI unit for T-LINK Mini System (Fuji Electric Co., Ltd.)</td>
<td></td>
</tr>
<tr>
<td>(SQ kit)</td>
<td>EX121-SDN1</td>
<td>SI unit for DeviceNet, CompoBus/D (OMRON Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SR1 kit)</td>
<td>EX121-SCS1(-XP)</td>
<td>SI unit for 16 point CompoBus/S System (OMRON Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SR2 kit)</td>
<td>EX121-SCS2(-XP)</td>
<td>SI unit for 8 point CompoBus/S System (OMRON Corporation)</td>
<td></td>
</tr>
<tr>
<td>(SV kit)</td>
<td>EX121-SMJ1(-XP)</td>
<td>Mitsubishi Electric Corporation: CC-LINK System</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) A S kit is composed of a flat ribbon cable housing assembly (AXT100-2-PS20) of 1 SI unit and 2 P kit (20 pins). Place an order for AXT100-2-PS20 separately. Suffix -XP for dustproof type SI unit.

Note 2) Top/vertical entry connector for FU and PU while side (horizontal) entry connector for FS and PS.

Since no connector assembly is included, order it separately. (Refer to page 2-4-93.)

Note 3) In the case of standard specifications and double wiring, ④ is for 1 to 4 stations and ⑤ is for 5 to 8 stations.

---

<D Side End Plate Assembly>
⑥ D side end plate assembly no.

VVQ1000-3A-7

Note) The ⑥'s fitting assembly is included.

<U Side End Plate Assembly No.>
⑦ U side end plate assembly no.

VVQ1000-2A-7

Note) The ⑦'s fitting assembly is included.

<Replacement Parts>

<table>
<thead>
<tr>
<th>No.</th>
<th>Part no.</th>
<th>Description</th>
<th>Material</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>⑧</td>
<td>VVQ1000-80A-7-2</td>
<td>Bushing assembly</td>
<td>Stainless steel</td>
<td>3</td>
</tr>
</tbody>
</table>

---

<Fittings Assembly>
⑩ Fittings assembly part no.

VVQ1000-50A-1

Port size
C3: Applicable tubing ø3.2
C4: Applicable tubing ø4
C6: Applicable tubing ø6

Note 1) Standard SUP/EXH port is C6.
Note 2) Purchasing order is available in units of 10 pieces.