3 Port Solenoid Valve

VQZ100/200/300 Series

Metal Seal  Rubber Seal

Power consumption: 0.35 W / 0.9 W
(Standard)                             (High pressure type, High speed response type)

Compact, High Flow

<table>
<thead>
<tr>
<th>Series</th>
<th>Valve width (mm)</th>
<th>Flow rate characteristics</th>
<th>Flow rate characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Metal seal</td>
<td>Rubber seal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C [dm³/(s·bar)]</td>
<td>C [dm³/(s·bar)]</td>
</tr>
<tr>
<td>VQZ100</td>
<td>10</td>
<td>—</td>
<td>0.56 (Poppet)</td>
</tr>
<tr>
<td>VQZ200</td>
<td>15</td>
<td>1.3</td>
<td>1.7</td>
</tr>
<tr>
<td>VQZ300</td>
<td>18</td>
<td>2.4</td>
<td>3.0</td>
</tr>
<tr>
<td>VQZ100</td>
<td>10</td>
<td>—</td>
<td>1.0 (Poppet)</td>
</tr>
<tr>
<td>VQZ200</td>
<td>15</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>VQZ300</td>
<td>18</td>
<td>3.2</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Compact, High Flow

Body ported

Base mounted

[Option]
# Metal Seal / Rubber Seal
## 3 Port Solenoid Valve

### VQZ100/200/300

#### Solenoid Valve Variations

<table>
<thead>
<tr>
<th>Body Ported</th>
<th>Type of actuation</th>
<th>Voltage</th>
<th>Electrical entry</th>
<th>Light/Surge Voltage suppressor</th>
<th>Manual override</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3 Port</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VQZ100</strong></td>
<td>Metal (Poppet)</td>
<td>0.56</td>
<td>(Standard) 12 VDC</td>
<td>Grommet (G)</td>
<td>Non-locking push type (Tool required)</td>
</tr>
<tr>
<td>P.1222</td>
<td>Rubber</td>
<td></td>
<td>24 VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VQZ200</strong></td>
<td>1.3</td>
<td>1.7</td>
<td>(Option) 100 VAC</td>
<td>L-type plug connector (L)</td>
<td></td>
</tr>
<tr>
<td>P.1223</td>
<td></td>
<td></td>
<td>200 VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VQZ300</strong></td>
<td>2.4</td>
<td>3.0</td>
<td>110 VAC</td>
<td>M-type plug connector (M)</td>
<td></td>
</tr>
<tr>
<td>P.1223</td>
<td></td>
<td></td>
<td>220 VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VQZ100</strong></td>
<td>Metal (Poppet)</td>
<td>1.0</td>
<td>(Except VQZ100)</td>
<td>L-type plug connector (L)</td>
<td></td>
</tr>
<tr>
<td>P.1238</td>
<td>Rubber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VQZ200</strong></td>
<td>2.0</td>
<td>3.0</td>
<td></td>
<td>M-type plug connector (M)</td>
<td></td>
</tr>
<tr>
<td>P.1239</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VQZ300</strong></td>
<td>3.2</td>
<td>4.1</td>
<td></td>
<td>DIN terminal (YZ)</td>
<td></td>
</tr>
<tr>
<td>P.1239</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Manifold Options**

**Base Mounted**

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Piping specifications</th>
<th>Applicable solenoid valve</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VV3QZ12-□□</td>
<td>Top Rc 1/8 C3 (for ø3.2) C4 (for ø4) C6 (for ø6) M5 (M5 thread)</td>
<td>VQZ115</td>
<td>2 to 20 stations</td>
</tr>
<tr>
<td>VQZ200</td>
<td>VV3QZ22-□□</td>
<td>Top Rc 1/8 C4 (for ø4) C6 (for ø6) M5 (M5 thread)</td>
<td>VQZ2□□</td>
<td>2 to 20 stations</td>
</tr>
<tr>
<td>VQZ300</td>
<td>VV3QZ32-□□</td>
<td>Top Rc 1/4 C6 (for ø6) C8 (for ø8) C10 (for ø10) Rc 1/4</td>
<td>VQZ3□□</td>
<td>2 to 20 stations</td>
</tr>
</tbody>
</table>

**Silencer**

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Piping specifications</th>
<th>Applicable solenoid valve</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VV3QZ15-□□</td>
<td>Side Rc 1/8 C3 (for ø3.2) C4 (for ø4) C6 (for ø6) M5 (M5 thread)</td>
<td>VQZ115</td>
<td>2 to 20 stations</td>
</tr>
<tr>
<td>VQZ200</td>
<td>VV3QZ25-□□</td>
<td>Side Rc 1/4 C4 (for ø4) C6 (for ø6) C8 (for ø8) Rc 1/8</td>
<td>VQZ2□□</td>
<td>2 to 20 stations</td>
</tr>
<tr>
<td>VQZ300</td>
<td>VV3QZ35-□□</td>
<td>Side 1(P) port Rc 3/8 3(R) port Rc 1/4 C6 (for ø6) C8 (for ø8) C10 (for ø10) Rc 1/4</td>
<td>VQZ3□□</td>
<td>2 to 20 stations</td>
</tr>
</tbody>
</table>

**Blanking plug**

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Piping specifications</th>
<th>Applicable solenoid valve</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VVQZ100-10A-5</td>
<td>(for VQZ100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VQZ200</td>
<td>VVQZ200-10A-2</td>
<td>(for VQZ200)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VQZ300</td>
<td>VVQZ300-10A-2</td>
<td>(for VQZ300)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DIN rail**

AXT100-DR□□

**Port plug**

VVQZ100-CP (for VQZ100)
# 3 Port Solenoid Valve

## VQZ100/200/300 Series

### Single Unit

**Type of actuation**
- **N.C.**
- **(P) 2(A) port**
- **(P) 3(P) port**

**Series**
- **VQZ100 body width 10 mm**

**Body type**
- **Manual override**
  - Nil: Non-locking push type
  - B: Locking type (Tool required)

**Coil voltage**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>High pressure type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>External pilot type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KR</td>
<td>High pressure/External pilot type</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Port size [2(A) port]**
- **C3**
- **C4**
- **C6**
- **M5**

**Option**
- Nil: None
- F: With bracket

**Electrical entry**
- G: Grommet (DC specification)
- L: L-type plug connector without lead wire
- LO: L-type plug connector with lead wire
- M: M-type plug connector without lead wire
- MO: M-type plug connector with lead wire

**Manual override**
- Nil: None
- F: With bracket

**Coil voltage**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100 VAC (50/60 Hz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>200 VAC (50/60 Hz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>110 VAC [115 VAC] (50/60 Hz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>220 VAC [230 VAC] (50/60 Hz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>24 VDC</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>12 VDC</td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>

**CE-compliant**
- Nil: None
- Q: CE-compliant

**Note**
- Standard lead wire length: 300 mm
- For applicable One-touch fitting and silencer models for this valve series, refer to page 1258.
- When placing an order for body ported solenoid valve as a single unit, mounting screw for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 1237.)
Body Ported VQZ100/200/300 Series

VQZ200/300 / How to Order Valve

Series

2 VQZ200 body width 15 mm
3 VQZ300 body width 18 mm

Type of actuation

N.C. 2(A) metal seal
N.O. 2(A) rubber seal

Body type

2 Body ported

Function

Nil Standard
B Note 1) High speed response type
K Note 1) High pressure type (Metal seal type only)
R Note 1, 2) External pilot type
BR Note 1, 2) High speed response/External pilot type
KR Note 1, 2) High pressure/External pilot type (Metal seal type only)

Electrical entry

G: Grommet (DC specification)
L: L-type plug connector with lead wire
O: L-type plug connector without connector
M: M-type plug connector with lead wire
MO: M-type plug connector without connector

Manual override

Nil: Non-locking push type (Tool required)
B: Locking type (Tool required)

Coil voltage

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

Note) For applicable One-touch fitting and silencer models for this valve series, refer to back page 1258.

Caution

Use standard (DC) specification for continuous duty.

Note) AC-type models that are CE-compliant have DIN terminals only.

Note 1) Semi-standard
Note 2) For details on external pilot type, refer to page 1236.
Note 3) For AC specification power consumption, refer to page 1224.

AC 1223

SYJ
VQZ
VP
VG
VP3
**VQZ100/200/300 Series**

### Specifications

<table>
<thead>
<tr>
<th>Valve construction</th>
<th>Fluid</th>
<th>Max. operating pressure (MPa)</th>
<th>Min. operating pressure (MPa)</th>
<th>Ambient and fluid temperature (°C)</th>
<th>Max. operating frequency (Hz)</th>
<th>Pilot exhaust method</th>
<th>Lubrication</th>
<th>Manual override</th>
<th>Mounting orientation</th>
<th>Impact/Vibration resistance (m/s²)</th>
<th>Enclosure*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal seal</td>
<td>Air</td>
<td>0.7 [High pressure type: 1.0]</td>
<td>0.1</td>
<td>−10 to 50 (No freezing)</td>
<td>20</td>
<td>Individual exhaust</td>
<td>Not required</td>
<td>Push type, Locking type</td>
<td>Free</td>
<td>150/30</td>
<td>Dustproof (DIN terminal: IP65)</td>
</tr>
<tr>
<td>Rubber seal</td>
<td></td>
<td>0.7 [High pressure type: 1.0]</td>
<td>0.15</td>
<td></td>
<td>20</td>
<td>Common exhaust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VQZ100 (Poppet seal)</td>
<td></td>
<td></td>
<td>0.15</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note 1)** Based on JIS B 8419: 2010 (Supply pressure: 0.5 MPa; with light/surge voltage suppressor: clean air)

**Note 2)** Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

**Note 3)** When IP65 compliant DIN terminals are selected: VQZ SERIES [W1-□□□□□□□□□□□□□□□-□□□□□□□□□□□□□□□-□]

**Made to Order**

For details, refer to page 1255.

**External pilot type**

- High pressure type (Metal seal type only)
- High speed response type

For 115 VAC and 230 VAC, the allowable voltage is −15% to +5% of rated voltage.

### Flow Rate Characteristics

<table>
<thead>
<tr>
<th>Series</th>
<th>Valve construction</th>
<th>Model</th>
<th>Flow rate characteristics</th>
<th>Response time (ms)</th>
<th>Note 2</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>N.C. valve</td>
<td>VQZ115</td>
<td>1 → 2 (P → A)</td>
<td>10 or less</td>
<td>13 or less</td>
<td>22 or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 → 3 (A → R)</td>
<td>10 or less</td>
<td>13 or less</td>
<td>22 or less</td>
</tr>
<tr>
<td>VQZ200</td>
<td>N.C. valve</td>
<td>VQZ212</td>
<td>1 → 2 (P → A)</td>
<td>22 or less</td>
<td>14 or less</td>
<td>34 or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 → 3 (A → R)</td>
<td>22 or less</td>
<td>14 or less</td>
<td>34 or less</td>
</tr>
<tr>
<td>VQZ300</td>
<td>N.C. valve</td>
<td>VQZ312</td>
<td>1 → 2 (P → A)</td>
<td>22 or less</td>
<td>17 or less</td>
<td>34 or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 → 3 (A → R)</td>
<td>22 or less</td>
<td>17 or less</td>
<td>34 or less</td>
</tr>
</tbody>
</table>

**Solenoid Specifications**

### Electrical entry

<table>
<thead>
<tr>
<th>Coil rated voltage (V)</th>
<th>DC</th>
<th>AC 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>24, 12</td>
<td>100, 110, 200, 220*</td>
</tr>
<tr>
<td>AC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note 1)** When using body ported type as a single unit, the individual exhaust is used.

**Note 2)** Based on IEC60529

**Apparent power (VA)**

<table>
<thead>
<tr>
<th>Voltage (V)</th>
<th>DC</th>
<th>AC</th>
<th>Apparent power (VA)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 V</td>
<td>0.78 (With light: 0.81)</td>
<td>0.78 (With light: 0.87)</td>
<td></td>
</tr>
<tr>
<td>110 V [115 V]</td>
<td>0.86 (With light: 0.89)</td>
<td>0.86 (With light: 0.87)</td>
<td></td>
</tr>
<tr>
<td>200 V</td>
<td>1.18 (With light: 1.22)</td>
<td>1.15 (With light: 1.30)</td>
<td></td>
</tr>
<tr>
<td>220 V [230 V]</td>
<td>1.30 (With light: 1.34)</td>
<td>1.27 (With light: 1.46)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.39 (With light: 1.60)</td>
<td></td>
</tr>
</tbody>
</table>

**Power consumption (W)**

<table>
<thead>
<tr>
<th>Voltage (V)</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 V</td>
<td>0.35 ([With light: 0.4 (DIN terminal with light: 0.45)]</td>
<td>0.9 ([With light: 0.95 (DIN terminal with light: 1.0)])</td>
</tr>
<tr>
<td>110 V [115 V]</td>
<td>0.86 ([With light: 0.89])</td>
<td>0.86 ([With light: 0.87])</td>
</tr>
<tr>
<td>200 V</td>
<td>1.18 (With light: 1.22)</td>
<td>1.15 (With light: 1.30)</td>
</tr>
<tr>
<td>220 V [230 V]</td>
<td>1.30 (With light: 1.34)</td>
<td>1.27 (With light: 1.46)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.39 (With light: 1.60)</td>
</tr>
</tbody>
</table>

**Lubrication**

- Standard: 0.15 W
- High speed response: 0.7 W
- High pressure: 0.69 W
- Air: 0.35 W

**Response time (ms)**

<table>
<thead>
<tr>
<th>Voltage (V)</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 V</td>
<td>10 or less</td>
<td>13 or less</td>
</tr>
<tr>
<td>110 V [115 V]</td>
<td>14 or less</td>
<td>18 or less</td>
</tr>
<tr>
<td>200 V</td>
<td>15 or less</td>
<td>36 or less</td>
</tr>
<tr>
<td>220 V [230 V]</td>
<td>17 or less</td>
<td>34 or less</td>
</tr>
</tbody>
</table>

**Enclosure**

- Dustproof (DIN terminal: IP65)

**Semi-standard Specifications**

- High speed response type
- High pressure type (Metal seal type only)
- External pilot type*

* For details on external pilot type, refer to page 1236.

**Flow Rate Characteristics**

<table>
<thead>
<tr>
<th>Series</th>
<th>Valve construction</th>
<th>Model</th>
<th>Flow rate characteristics</th>
<th>Response time (ms)</th>
<th>Note 2</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 → 2 (P → A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 → 3 (A → R)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note 1)** Based on JIS B 8419: 2010 (Supply pressure: 0.5 MPa; with light/surge voltage suppressor: clean air)

**Note 2)** Weight for threaded connection
### Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool valve</td>
<td>Aluminum/HNBR</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pilot valve assembly</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P. R plate</td>
<td>Resin/Aluminum</td>
<td>VQZ100-12A (Standard) VQZ100-12B (External pilot type) Note)</td>
</tr>
</tbody>
</table>

*Note: It is not possible to change the standard product to external pilot type, and vice versa.*

### VQZ100

**Poppet type**

- **Construction**
  - VQZ100
  - Metal seal type
  - Rubber seal type

### VQZ200/300

**Metal seal type**

- **Component Parts**
  - No. | Description             | Material                  |
  - 1   | Body                    | Resin                     |
  - 2   | Spool, Sleeve           | Stainless steel           |
  - 3   | Spool valve             | Aluminum/HNBR             |
  - 4   | Piston                  | Resin                     |

**Rubber seal type**

- **Component Parts**
  - No. | Description             | Material                  |
  - 1   | Body                    | Resin                     |
  - 2   | Spool, Sleeve           | Stainless steel           |
  - 3   | Spool valve             | Aluminum/HNBR             |
  - 4   | Piston                  | Resin                     |

*Note: For "How to Order Pilot Valve Assembly", refer to page 1237.*

**Construction**

- **VQZ100**
  - Poppet type
  - **Component Parts**
    - No. | Description             | Material                  |
    - 1   | Body                    | Resin                     |
    - 2   | Spool valve             | Aluminum/HNBR             |
    - 3   | Pilot valve assembly    | —                         |
    - 4   | P. R plate              | Resin/Aluminum            |

- **Note:** It is not possible to change the standard product to external pilot type, and vice versa.
VQZ100/200/300 Series

Dimensions: VQZ100

Single Unit

Grommet (G): VQZ115□□□G□1-C3, C4, C6-PR

Note) Tightening torque: 0.25 to 0.35 N·m

One-touch fitting

[X: External pilot port]

Manual override

Note) For One-touch fittings for P/R port and silencer part no., refer to page 1258.

L-type plug connector (L): VQZ115□□□L□1-C3, C4, C6-PR

M-type plug connector (M): VQZ115□□□M□1-C3, C4, C6-PR

Note) For bracket assembly part no., refer to page 1237.

Unless otherwise indicated, dimensions are the same as Grommet (G).
### Dimensions: VQZ200

#### Single Unit

**Grommet (G): VQZ2□2□□G□1-C4, C6**

- One-touch fitting [2(A) port]
  - Applicable tubing O.D.: ø4, ø5/32”
  - ø6, ø1/4”
- Manual override
- M3 x 0.5 (External pilot port)
  - [For external pilot]
- 2 x ø2.7 (For manifold mounting)
- 2 x ø3.2 (For mounting)
- 1/8 [1(P) port]
- G1/16 [3(R) port]
- ø2.8 (PE port)
- ø2.6 (Reverse-mounting-prevention hole (CE-compliant models only))
- Thread length 4

**Note:** For One-touch fittings for P/R port and silencer part no., refer to page 1258.

**L-type plug connector (L): VQZ2□2□□L□1-C4, C6**

- Approx. 300 (Lead wire length)

**DIN terminal (Y): VQZ2□2□□Y□1-C4, C6**

- Approx. 300 (Lead wire length)

**M-type plug connector (M): VQZ2□2□□M□1-C4, C6**

- Unless otherwise indicated, dimensions are the same as Grommet (G).

---

**Note:** Unless otherwise indicated, dimensions are the same as Grommet (G).

---

**Body Ported VQZ100/200/300 Series**
**Dimensions: VQZ300**

### Single Unit

**Grommet (G): VQZ3□□□□□□□□□□C6, C8, C10**

- **Approx. 300** (Lead wire length)
- **76**
- **53.8**
- **41.8**
- **22**
- **2 x ø3.4** (For manifold mounting)
- **2 x ø4.5** (For mounting)
- **7.1**
- **28.6**
- **Manual override**
- **M5 x 0.8** (External pilot port) <For external pilot>
- **ø2.5 (Reverse-mounting-prevention hole)**
- **(CE-compliant models only)**
- **ø1.8** (PE port)
- **1/8** [3(R) port]
- **1/4** [1(P) port]
- **2 x ø3 die-cast hole** (For manifold gasket positioning)
- **One-touch fitting**
- **[2(A) port]**
- **2 x ø4.5** (For mounting)
- **Applicable tubing O.D.: ø6, ø1/4" ø8, ø5/16" ø10, ø3/8"**
- **Thread length 6**

**With bracket**

**Note:** For bracket assembly part no., refer to page 1237.

### L-type plug connector (L): VQZ3□□□□□□□□□□C6, C8, C10

- **Approx. 300** (Lead wire length)
- **85.8 [88]**
- **32 [39]**

Unless otherwise indicated, dimensions are the same as Grommet (G).

### M-type plug connector (M): VQZ3□□□□□□□□□□C6, C8, C10

- **Approx. 300** (Lead wire length)
- **76 [78.2]**
- **71**
- **43.3 [50.3]**

Unless otherwise indicated, dimensions are the same as Grommet (G).

### DIN terminal (Y): VQZ3□□□□□□□□□□C6, C8, C10

- **Max. 10**
- **93.7**
- **53.8**
- **61.3**
- **53.8**
- **43.5**
- **35**
- **94.6**

Application cable O.D.
- ø3.5 to ø7

Unless otherwise indicated, dimensions are the same as Grommet (G).
3 Port Solenoid Valve

**VQZ100/200/300 Series**

**Manifold**

**Connector Kit**

---

**VQZ100 / How to Order Manifold**

**Series**

VV3QZ 1 2 - 08 C - D -

**Manifold type**

1. VQZ100

**Stations**

- 2 stations
- 20 stations

**Kit type**

- C - Connector

**Option**

- Nil
- Q - CE-compliant

**CE-compliant**

- Nil
- Q - CE-compliant

**Port size [2(A) port]**

- C3 - ø3.2 One-touch fitting
- C4 - ø4 One-touch fitting
- C6 - ø6 One-touch fitting
- M5 - M5 thread (Replaceable type)

**Manual override**

- Nil - Non-locking push type
- B - Locking type (Tool required)

---

**VQZ100 / How to Order Valve**

**Series**

VQZ 1 1 5 - 5 M 1 - C3 -

**Type of actuation**

1. N.C.

**Body type**

**Function**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Standard</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>K</td>
<td>Note 1) High pressure type</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>R</td>
<td>Note 1, 2) External pilot type</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>KR</td>
<td>Note 1, 2) High pressure/External pilot type</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

**Electrical entry**

- G - Grommet (DC specification)
- L - L-type plug connector with lead wire
- LO - L-type plug connector without connector
- M - M-type plug connector with lead wire
- MO - M-type plug connector without connector

**With light/surge voltage suppressor**

- Nil
- Yes

**Coil voltage**

- CE-compliant

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Nil</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 VAC (50/60 Hz)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>200 VAC (50/60 Hz)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>110 VAC [115 VAC] (50/60 Hz)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>220 VAC [230 VAC] (50/60 Hz)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>24 VDC</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>12 VDC</td>
<td>○</td>
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</tbody>
</table>

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**Caution**

Use standard (DC) specification for continuous duty.
**VQZ100/200/300 Series**

**VQZ200/300 / How to Order Manifold**

- **Series**
  - VV3QZ 2 2 08 C
- **Manifold type**
  - 2 Body ported
- **Stations**
  - 02 2 stations
  - 20 20 stations
- **CE-compliant**
  - Nil
  - Q CE-compliant
- **Option**
  - Nil None
  - D DIN rail mounting (With standard DIN rail length)
  - D0 DIN rail mounting (Without DIN rail)
  - Note) Order DIN rail separately. For DIN rail part no., refer to page 1235.
- **Kit type**
  - Nil
  - C Connector
- **Coil voltage**
  - 1 100 VAC (50/60 Hz)
  - 2 200 VAC (50/60 Hz)
  - 3 110 VAC (115 VAC) (50/60 Hz)
  - 4 220 VAC (230 VAC) (50/60 Hz)
  - 5 24 VDC
  - 6 12 VDC

**VQZ200/300 / How to Order Valve**

- **Series**
  - VQZ 2 1 2 5 M 1
- **Type of actuation**
  - 1 N.C. Metal seal
  - 2 N.O. Metal seal
  - 3 N.C. Rubber seal
  - 4 N.O. Rubber seal
- **Body type**
  - 2 Body ported
- **CE-compliant**
  - Nil
  - Q CE-compliant
- **IP65 compliant**
  - Nil
  - W Compliant
  - Note) VQZ200/300 DIN terminal rubber seal only (except external pilot). For details on IP65 enclosure, refer to page 1236.
- **Port size [2(A) port]**
  - Note) AC-type models that are CE-compliant have DIN terminals only.
  - Symbol Port size VQZ200 VQZ300
  - C4 ø4 One-touch fitting — —
  - C6 ø6 One-touch fitting — —
  - C8 ø8 One-touch fitting — —
  - C10 ø10 One-touch fitting — —
  - M5 M5 thread — —
  - M8 M8 thread — —
  - Note) For inch size One-touch fittings and optional thread type, refer to page 1236.
- **Electrical entry**
  - Symbol Electrical entry Light/surge voltage suppressor CE-compliant
  - G Grommet (DC specification) None — ●
  - L L-type plug connector with lead wire — — ●
  - LO L-type plug connector without connector — — ●
  - M M-type plug connector with lead wire — — ●
  - MO M-type plug connector without connector — — ●
  - Y DIN terminal None ● ●
  - YO DIN terminal without connector ● ● ●
  - YZ DIN terminal Yes ● ●
  - YS DIN terminal (DC specification) Yes (Without light) — ●
  - Note 1) Standard lead wire length: 300 mm
  - Note 3) For AC specification power consumption, refer to page 1224.

**Caution**

Use standard (DC) specification for continuous duty.
Manifold Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Piping specifications</th>
<th>Applicable solenoid valve</th>
<th>Applicable stations</th>
<th>Manifold base weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VV3QZ12-□□□</td>
<td>Top</td>
<td>Rc 1/8</td>
<td>C3 (for ø3.2)</td>
<td>VQZ115</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>2 to 20 stations</td>
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</tr>
<tr>
<td>VQZ200</td>
<td>VV3QZ22-□□□</td>
<td>Top</td>
<td>Rc 1/8</td>
<td>C4 (for ø4)</td>
<td>VQZ□2</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>2 to 20 stations</td>
</tr>
<tr>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>VQZ300</td>
<td>VV3QZ32-□□□</td>
<td>Top</td>
<td>Rc 1/4</td>
<td>C6 (for ø6)</td>
<td>VQZ□2</td>
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<tr>
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<td></td>
</tr>
</tbody>
</table>

How to Order Manifold Assembly (Example)

Add the valve and option part number under the manifold base part number.
When entry of part numbers becomes complicated, indicate by the manifold specification sheet.
**VQZ100/200/300 Series**

**Dimensions: VQZ100**

**VV3QZ12- Stations C**

**Grommet (G)**

One-touch fitting

- [2(A) port]
  - Applicable tubing O.D.: ø3.2, ø1/8" ø4, ø5/32" ø6, ø1/4"
  - 2 x ø4.3 (For mounting)

(DIN rail) (DIN rail clamp thread)

- Manual override: P = 10.5 (Pitch)
- Approx. 300 (Lead wire length)
- (Rail mounting hole pitch: 12.5)

(Station n) ~ ~ ~ ~ ~ ~ ~ ~ (Station 1)

The dashed lines indicate the DIN rail mounting [-D].

**L-type plug connector (L)**

**M-type plug connector (M)**

- Approx. 300 (Lead wire length)

- Unless otherwise indicated, dimensions are the same as Grommet (G).

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
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<td>85.5</td>
<td>98</td>
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</table>

**n: Stations (Max. 20 stations)**
**Dimensions: VQZ200**

**VV3QZ22- Stations C**

**Grommet (G)**

- One-touch fitting
- [2(A) port]
- Applicable tubing O.D.: ø4, ø5/32, ø6, ø1/4
- M3 x 0.5
  - (External pilot port)
  - <For external pilot>
- DIN rail clamp thread
- L3 L4 L5
- (Pitch)
  - P = 16
- L2
  - (Rail mounting hole pitch: 12.5)
- L1
- PE port
- 34
- 7.8
- 18.5
- 47.3
- 7.5
- 19.3
- 3.5
- 47
- 34.1
- 5.5
- 37.5

**L-type plug connector (L)**

- Approx. 300
- (Lead wire length)
- 79 [81.2]
- 47.3 [54.3]
- C6 92.2
- N7 54
- 61.1
- 72.4
- 79.9

**M-type plug connector (M)**

- Approx. 300
- (Lead wire length)
- 69.2 [71.4]
- 58.6 [65.6]

**DIN terminal (Y)**

- 85.4
- 6.5
- Pg7
- 61.1
- 72.4
- 79.9
- Max. 10
- Applicable cable O.D.
  - ø3.5 to ø7

**Dimensions**

<table>
<thead>
<tr>
<th>L</th>
<th>1</th>
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</tr>
</tbody>
</table>

**Notes:**
- Unless otherwise indicated, dimensions are the same as Grommet (G).
- [ ] AC
- The dashed lines indicate the DIN rail mounting [-D].

**Exceptory:**
- Unless otherwise indicated, dimensions are the same as Grommet (G).
- [ ] AC

**Stations**

- Body Ported
- VQZ100/200/300 Series
### Dimensions: VQZ300

#### VV3QZ32–Stations C

#### Grommet (G)

One-touch fitting

- [2(A) port]
  - Applicable O.D.: ø6, ø1/4”, ø8, ø5/16”
  - ø10, ø3/8”

- [2(A) port] (For 1/4)

- DIN rail clamp thread

- M5 x 0.8
  - (External pilot port)
  - <For external pilot>

- Manual override

- [Pitch]
  - P = 19

- [L2 (Rail mounting hole pitch: 12.5)]

- [Approx. 300 (Lead wire length)]

- [56.5]

- [L1]

- [56.5]

- [Dimensions: VQZ100/200/300 Series]

- [DIN rail]

- [DIN rail clamp thread]

- [PE port]

- [Manual override]

#### L-type plug connector (L)

- [Approx. 300 (Lead wire length)]

- [56.5 [63.5]]

- [85.8 [98]]

#### M-type plug connector (M)

- [Approx. 300 (Lead wire length)]

- [67.8 [74.8]]

- [76 [82.8]]

#### DIN terminal (Y)

- [Approx. 300]

- [57.8]

- [78.3]

- [85.8]

- [57.5]

- [90.7]

- [Max. 10]

- [Applicable cable O.D.: ø3.5 to ø7]

- [Pg7]

- [94.6]

- [85.8]

#### Table: Dimensions

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>19</td>
<td>110.5</td>
<td>135.5</td>
<td>148</td>
<td>173</td>
<td>198</td>
<td>210.5</td>
<td>235.5</td>
<td>248</td>
<td>273</td>
<td>285.5</td>
<td>310.5</td>
<td>323</td>
<td>348</td>
<td>360.5</td>
<td>385.5</td>
<td>398</td>
<td>423</td>
<td>435.5</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>87.5</td>
<td>100</td>
<td>125</td>
<td>137.5</td>
<td>162.5</td>
<td>187.5</td>
<td>200</td>
<td>225</td>
<td>237.5</td>
<td>262.5</td>
<td>275</td>
<td>300</td>
<td>312.5</td>
<td>337.5</td>
<td>350</td>
<td>375</td>
<td>387.5</td>
<td>412.5</td>
<td>425</td>
<td></td>
</tr>
<tr>
<td>L3</td>
<td>61</td>
<td>80</td>
<td>99</td>
<td>118</td>
<td>137</td>
<td>156</td>
<td>175</td>
<td>194</td>
<td>213</td>
<td>232</td>
<td>251</td>
<td>270</td>
<td>289</td>
<td>308</td>
<td>327</td>
<td>346</td>
<td>365</td>
<td>384</td>
<td>403</td>
<td></td>
</tr>
<tr>
<td>L4</td>
<td>18.5</td>
<td>15.5</td>
<td>18.5</td>
<td>15</td>
<td>16</td>
<td>21</td>
<td>18</td>
<td>21</td>
<td>17.5</td>
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<td>17.5</td>
<td>20.5</td>
<td>17</td>
<td>20</td>
<td>17</td>
<td>20</td>
<td>16.5</td>
<td>19.5</td>
<td>16.5</td>
<td></td>
</tr>
<tr>
<td>L5</td>
<td>49</td>
<td>68</td>
<td>87</td>
<td>106</td>
<td>125</td>
<td>144</td>
<td>163</td>
<td>182</td>
<td>201</td>
<td>220</td>
<td>239</td>
<td>258</td>
<td>277</td>
<td>296</td>
<td>315</td>
<td>334</td>
<td>353</td>
<td>372</td>
<td>391</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Unless otherwise indicated, dimensions are the same as Grommet (G). [ ]: AC

---

The dashed lines indicate the DIN rail mounting [-D].

---

U side

D side

L1

L2

L3

L4

L5

L n

Station n

Station 1

(Station n)  ------  ------  (Station 1)

(Station n)  ------  ------  (Station 1)

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Manifold Options

Blanking plate assembly
VVQZ100-10A-5 (for VQZ100)
VVQZ200-10A-2 (for VQZ200)
VVQZ300-10A-2 (for VQZ300)

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

Blanking plug
KQ2P-23
KQ2P-04
KQ2P-06
KQ2P-08
KQ2P-10

Dimensions (mm)
<table>
<thead>
<tr>
<th>L Dimension</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
</tbody>
</table>

As for L, enter the number from the DIN rail dimensions table.
For L dimension, refer to the dimensions of each kit.

Each manifold can be mounted on a DIN rail.
Insert “D” at the end of the manifold part number.
The DIN rail is approximately 30 mm longer than the length of manifold.

DIN rail
AXT100-DR-

Silencer
(for manifold EXH port)
Silencer is installed in the manifold EXH port.

Dimensions
<table>
<thead>
<tr>
<th>Model</th>
<th>Silencer part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>AN110-01</td>
</tr>
<tr>
<td>VQZ200</td>
<td>AN110-01</td>
</tr>
<tr>
<td>VQZ300</td>
<td>AN20-02</td>
</tr>
</tbody>
</table>

For a silencer to be mounted in a single valve unit, refer to page 1258.
## External Pilot Specification

The external pilot specification is used when the operating pressure is below the minimum operating pressure 0.1 to 0.15 MPa or when valve is used for a vacuum application. Order a valve by adding the external pilot specification [R] to the part number.

### Valve Part No.

<table>
<thead>
<tr>
<th>VQZ</th>
<th>2</th>
<th>5</th>
<th>R</th>
<th>—</th>
<th>—</th>
<th>—</th>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

- Entry is the same as standard products.

*CE-compliant*  
Q CE-compliant

### Pressure Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>VQZ100 (Note 1)</th>
<th>VQZ200/300</th>
</tr>
</thead>
<tbody>
<tr>
<td>External pilot pressure range</td>
<td>Metal seal</td>
<td>Rubber seal (VQZ100: poppet)</td>
</tr>
<tr>
<td>VQZ100</td>
<td>—</td>
<td>0.2 to 0.7 MPa</td>
</tr>
<tr>
<td>VQZ200/300</td>
<td>0.1 to 0.7 MPa</td>
<td>0.15 to 0.7 MPa</td>
</tr>
</tbody>
</table>

Note 1) In case of the high pressure type, upper limit of max. operating pressure and external pilot pressure range is 1 MPa.

Note 2) Pump down from 1(P) port when VQZ100 series vacuum type is specified. Apply pressure from 3(R) port to relieve vacuum pressure. Set the release pressure at 50% of external pilot pressure or less. In addition, when the VQZ100 is to be used at an operating pressure greater than 0.2 MPa, please assure that the operating pressure is set to equal to or less than the external pilot pressure.

### Inch Size One-touch Fittings and Optional Threads

Inch size One-touch fittings and NPT, NPTF and G thread are available.

#### Valve Part No.

<table>
<thead>
<tr>
<th>VQZ</th>
<th>2</th>
<th>5</th>
<th>—</th>
<th>—</th>
<th>—</th>
<th>—</th>
<th>N7</th>
<th>T</th>
<th>—</th>
</tr>
</thead>
</table>

- Entry is the same as standard products.

*CE-compliant*  
Q CE-compliant

### Cylinder port

<table>
<thead>
<tr>
<th>Symbol</th>
<th>N1</th>
<th>N3</th>
<th>N7</th>
<th>N9</th>
<th>N11</th>
<th>M5</th>
<th>Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable tubing O.D. (Inch)</td>
<td>ø1/8”</td>
<td>ø5/32”</td>
<td>ø1/4”</td>
<td>ø5/16”</td>
<td>ø3/8”</td>
<td>M5 thread</td>
<td>1/4 thread</td>
</tr>
</tbody>
</table>

| 2(A) port |
| VQZ100 | ● | ● | ● | — | — | ● | — |

| VQZ200 | — | ● | ● | — | — | ● | — |

| VQZ300 | — | — | ● | ● | ● | — | ● |

Note) Metric size One-touch fittings (CE) are also available.

#### Thread type (Cylinder port and 1(P), 3(R) ports)

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

Note 1) 3(R) port of the VQZ200 is only G1/16.

Note 2) Except VQZ100

### Manifold Part No.

<table>
<thead>
<tr>
<th>VV3QZ</th>
<th>2</th>
<th>C</th>
<th>D</th>
<th>00T</th>
</tr>
</thead>
</table>

- Entry is the same as standard products.

*CE-compliant*  
Q CE-compliant

### Thread type (1(P), 3(R) ports)

| Nil | Rc |
| 00N | NPT |
| 00T | NPTF |
| 00F | G |

#### IP65 Enclosure (Based on IEC60529)

DIN terminal is available with IP65 enclosure.

### Valve Part No.

(Applicable to the VQZ200/300 rubber seal with the exception of the external pilot type)

<table>
<thead>
<tr>
<th>VQZ</th>
<th>2</th>
<th>3</th>
<th>—</th>
<th>Y</th>
<th>W1</th>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

- Entry is the same as standard products.

*CE-compliant*  
Q CE-compliant

Note) The pilot exhaust IP65 valves is common with main valve exhaust. (The standard valve has an individual exhaust for the pilot valve.)
VQZ Series  
Body Ported  
Replacement Parts

### One-touch Fitting Assembly (for Cylinder port)

<table>
<thead>
<tr>
<th>Model</th>
<th>Fitting size</th>
<th>C3</th>
<th>C4</th>
<th>C6</th>
<th>C8</th>
<th>C10</th>
<th>M5 (VQZ100 only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100/200</td>
<td>VVQ1000-50A-C3</td>
<td>VVQ1000-50A-C4</td>
<td>VVQ1000-50A-C6</td>
<td>—</td>
<td>—</td>
<td>VVQ1000-50A-M5</td>
<td></td>
</tr>
<tr>
<td>VQZ300</td>
<td>—</td>
<td>—</td>
<td>VVQ1000-51A-C6</td>
<td>VVQ1000-51A-C8</td>
<td>VVQ1000-51A-C10</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

Note) Purchasing order is available in units of 10 pieces.

### Plug connector assembly

- **DC**: SY100-30-4A-
- **100 VAC**: SY100-30-1A-
- **200 VAC**: SY100-30-2A-

### Gasket and screw assembly

- **VQZ115**: SYJ-VQZ115-A
- **VQZ200**: SYJ-VQZ200-A
- **VQZ300**: SYJ-VQZ300-A

### Bracket assembly

- **Model**: VQZ100
- **Part no.**: VQZ100-FB
- **Tightening torque [Nm]**: 0.25 to 0.35

### Pilot valve assembly

- **V111**
- **Manual override**: (Applicable to the VQZ100)

### DIN terminal type (Applicable to the VQZ200/300)

- **Symbol**
- **Specifications**
- **Function**
- **Coil voltage**
- **Electrical entry**

Note) VQZ pilot valve electrical entry (L, M) is the opposite of the how to order of valve body.

### Caution

When replacing only the pilot valve assembly, use caution because it is not possible to convert to a V115 (DIN terminal) from a V111 (Grommet, L-type, M-type), or vice versa.
Base Mounted Plug Lead Unit

3 Port Solenoid Valve
VQZ100/200/300 Series
Single Unit

VQZ100 / How to Order Valve

Series
1 VQZ100 body width 10 mm

Type of actuation
1 N.C.

Port size
CP Without sub-plate

Body type
5 Base mounted

Manual override
Nil: Non-locking push type
B: Locking type (Tool required)

Electrical entry

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K (Note 1)</td>
<td>High pressure type</td>
<td></td>
<td>0.3 W</td>
</tr>
<tr>
<td>R (Note 1, 2)</td>
<td>External pilot type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KR (Note 1, 2)</td>
<td>High pressure/External pilot type</td>
<td></td>
<td>0.3 W</td>
</tr>
</tbody>
</table>

Note 1) Semi-standard
Note 2) For details on external pilot type, refer to page 1253.
Note 3) For AC specification power consumption, refer to page 1240.

Caution
Use standard (DC) specification for continuous duty.

Coil voltage

<table>
<thead>
<tr>
<th>Voltage</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100 VAC (50/60 Hz)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>200 VAC (50/60 Hz)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>110 VAC [115 VAC] (50/60 Hz)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>220 VAC [230 VAC] (50/60 Hz)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>24 VDC</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>12 VDC</td>
<td></td>
</tr>
</tbody>
</table>

Note) For CE-compliant models, DC type only.

Note) For CE-compliant models, DC type only.

Note) When ordering single unit of the base mounted type solenoid valve, the mounting screws and gaskets for the manifold are included.

Note) For sub-plate part no., refer to page 1254.
Base Mounted **VQZ100/200/300 Series**

**VQZ200/300 / How to Order Valve**

- **Series**
  - 2: VQZ200 body width 15 mm
  - 3: VQZ300 body width 18 mm

- **Type of actuation**
  - 1: N.C. (2A) (R3 1P)
  - 2: N.O. (2A) (R3 1P)
  - 3: N.C. (2A) (R3 1P)
  - 4: N.O. (2A) (R3 1P)

- **Body type**
  - 5: Body mounted

**Function**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>High speed response type</td>
<td>0.3 W</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>High pressure type (Metal seal type only)</td>
<td>0.3 W</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>External pilot type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR</td>
<td>High speed response/External pilot type</td>
<td>0.3 W</td>
<td></td>
</tr>
<tr>
<td>KR</td>
<td>High pressure/External pilot type (Metal seal type only)</td>
<td>0.3 W</td>
<td></td>
</tr>
</tbody>
</table>

**Note**
- 1) Semi-standard
- 2) For details on external pilot type, refer to page 1253.
- 3) For AC specification power consumption, refer to page 1240.

**Caution**

Use standard (DC) specification for continuous duty.

**Electrical entry**

- **G**: Grommet (DC specification)
- **L**: L-type plug connector with lead wire
- **LO**: L-type plug connector without lead wire
- **M**: M-type plug connector with lead wire
- **MO**: M-type plug connector without lead wire

**Manual override**

- **Nil**: Non-locking push type (Tool required)
- **B**: Locking type (Tool required)

**Port size**

- **Rc 1/8**
- **Rc 1/4**
- **Rc 3/8**
- **Nil**

**Coil voltage**

- **AC**: 100 VAC (50/60 Hz)
- **DC**: 100 VAC (50/60 Hz)
- **110 VAC [115 VAC] (50/60 Hz)
- **220 VAC [230 VAC] (50/60 Hz)
- **24 VDC
- **12 VDC

**Note**
- 1) Standard lead wire length: 300 mm
- 2) For AC voltage valves there is no “S” type. It is already built-in to the rectifier circuit.
- 3) For sub-plate part no., refer to page 1254.
- 4) When ordering single unit of the base mounted type solenoid valve, the mounting screws and gaskets for the manifold are included.

**Made to Order**
(For details, refer to pages 1240 and 1255.)
Semi-standard Specifications

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X30</td>
<td>Pilot valve common exhaust</td>
</tr>
<tr>
<td>X90</td>
<td>Main valve flororubber</td>
</tr>
<tr>
<td>X113</td>
<td>All flororubber</td>
</tr>
</tbody>
</table>

Made to Order
(For details, refer to page 1255.)

Specifications

<table>
<thead>
<tr>
<th>Valve construction</th>
<th>Metal seal</th>
<th>Rubber seal</th>
<th>VQZ100 (Poppet seal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. operating pressure (MPa)</td>
<td>0.7 [High pressure type: 1.0]</td>
<td>0.7</td>
<td>0.7 [High pressure type: 1.0]</td>
</tr>
<tr>
<td>Min. operating pressure (MPa)</td>
<td>0.1</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Ambient and fluid temperature (°C)</td>
<td>–10 to 50 (No freezing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. operating frequency (Hz)</td>
<td>20</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Pilot exhaust method</td>
<td>Individual exhaust</td>
<td>Common exhaust</td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual override</td>
<td>Push type, Locking type (Tool required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact/Vibration resistance (m/s²)</td>
<td>150/30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosure*</td>
<td>Dustproof (DIN terminal: IP65 Note 2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1) High pressure type (Metal seal type only)
Note 2) Weight without sub-plate.

Response time values will change depending on pressure and air quality.

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed to axis and right angle directions of the main valve and armature when pilot signal is ON and OFF. (Value in the initial state)

Note 1) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

Note 2) When IP65 compliant DIN terminals are selected: VQZ

Solenoid Specifications

<table>
<thead>
<tr>
<th>Electrical entry</th>
<th>Grommet (G)</th>
<th>M-type plug connector (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-type plug connector (L)</td>
<td>G, L, M</td>
<td>Y</td>
</tr>
<tr>
<td>DIN terminal (Y)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coil rated voltage (V)</td>
<td>AC 50/60 Hz</td>
<td>24, 12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100, 110, 200, 220°</td>
</tr>
<tr>
<td>Allowable voltage fluctuation</td>
<td>±10% of rated voltage*</td>
<td></td>
</tr>
<tr>
<td>Power consumption (W)</td>
<td>Standard</td>
<td>High speed response, high pressure</td>
</tr>
<tr>
<td>DC</td>
<td>0.35 ([With light: 0.4 (DIN terminal with light: 0.45)]</td>
<td>0.9 ([With light: 0.95 (DIN terminal with light: 1.0)])</td>
</tr>
<tr>
<td>AC</td>
<td>100 V</td>
<td>0.78 (With light: 0.81)</td>
</tr>
<tr>
<td></td>
<td>110 V [115 V]</td>
<td>0.86 (With light: 0.89)</td>
</tr>
<tr>
<td></td>
<td>0.94 (With light: 0.97)</td>
<td>0.94 (With light: 1.07)</td>
</tr>
<tr>
<td></td>
<td>200 V</td>
<td>1.18 (With light: 1.22)</td>
</tr>
<tr>
<td></td>
<td>220 V [230 V]</td>
<td>1.30 (With light: 1.34)</td>
</tr>
<tr>
<td></td>
<td>1.42 (With light: 1.46)</td>
<td>1.39 (With light: 1.60)</td>
</tr>
<tr>
<td>Surge voltage suppressor</td>
<td>Varistor</td>
<td></td>
</tr>
<tr>
<td>Indicator light</td>
<td>LED (Neon light when AC with DIN terminal)</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

Note 2) When IP65 compliant DIN terminals are selected: VQZ

Flow Rate Characteristics

<table>
<thead>
<tr>
<th>Series</th>
<th>Valve construction</th>
<th>Model</th>
<th>Flow rate characteristics</th>
<th>Response time (ms) Note 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 → 2 (P → A)</td>
<td>2 → 3 (A → R)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C [dm³/(s·bar)]</td>
<td>b</td>
</tr>
<tr>
<td>VQZ100</td>
<td>N.C. valve</td>
<td>Poppet</td>
<td>VQZ115</td>
<td>0.87</td>
</tr>
<tr>
<td>VQZ200</td>
<td>N.C. valve</td>
<td>Metal seal</td>
<td>VQZ215</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>Rubber seal</td>
<td>VQZ235</td>
<td>2.3</td>
<td>0.46</td>
</tr>
<tr>
<td>N.O. valve</td>
<td>Metal seal</td>
<td>VQZ225</td>
<td>1.7</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>Rubber seal</td>
<td>VQZ245</td>
<td>2.5</td>
<td>0.43</td>
</tr>
<tr>
<td>VQZ300</td>
<td>N.C. valve</td>
<td>Metal seal</td>
<td>VQZ315</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Rubber seal</td>
<td>VQZ325</td>
<td>4.5</td>
<td>0.42</td>
</tr>
<tr>
<td>N.O. valve</td>
<td>Metal seal</td>
<td>VQZ345</td>
<td>2.9</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Rubber seal</td>
<td>VQZ345</td>
<td>4.4</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Note 1) Based on JIS B 8374-1981 (Supply pressure: 0.5 MPa; with light/surge voltage suppressor: clean air)
Response time values will change depending on pressure and air quality.

Note 2) Weight without sub-plate.
### Construction

#### VQZ100

Poppet type

<table>
<thead>
<tr>
<th>Component Parts</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool valve</td>
<td>Aluminum/HNBR</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pilot valve assembly</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Port plug</td>
<td>Resin/HNBR</td>
<td>VVQZ100-CP</td>
</tr>
</tbody>
</table>

#### Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-cast</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool, Sleeve</td>
<td>Stainless steel</td>
<td>Metal seal</td>
</tr>
<tr>
<td>3</td>
<td>Spool valve</td>
<td>Aluminum/HNBR</td>
<td>Rubber seal</td>
</tr>
<tr>
<td>4</td>
<td>Piston</td>
<td>Resin</td>
<td></td>
</tr>
</tbody>
</table>

#### Component Parts

Note) For “How to Order Pilot Valve Assembly”, refer to page 1254.

### VQZ200/300

Metal seal type

<table>
<thead>
<tr>
<th>Component Parts</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool valve</td>
<td>Resin/HNBR</td>
<td></td>
</tr>
</tbody>
</table>

Rubber seal type

<table>
<thead>
<tr>
<th>Component Parts</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Resin/HNBR</td>
<td></td>
</tr>
</tbody>
</table>

Note) For “How to Order Pilot Valve Assembly”, refer to page 1254.
Dimensions: VQZ100

Single Unit

Grommet (G): VQZ115☐-☐G☐1-01

M5 x 0.8
(For external pilot)

1/8
(For external pilot)

2 x ø3.4
(For mounting)

L-type plug connector (L): VQZ115☐-☐L☐1-01

M5 x 0.8
(PE port)

Manual override

Approx. 300
(Lead wire length)

M-type plug connector (M): VQZ115☐-☐M☐1-01

Grommet (G): VQZ115☐-☐G☐1-01

Approx. 300
(Lead wire length)

Unless otherwise indicated, dimensions are the same as Grommet (G).

AC

AC

1242
Dimensions: VQZ200

Single Unit

Grommet (G): VQZ2□□□□□G□□1-□□

L-type plug connector (L): VQZ2□□□□□□□□□□□□1-□□

DIN terminal (Y): VQZ2□□□□□□□□□□□□□□□□□□1-□□

M-type plug connector (M): VQZ2□□□□□□□□□□□□□□□□□□1-□□

Unless otherwise indicated, dimensions are the same as Grommet (G).

[□]: AC
### VQZ100/200/300 Series

#### Dimensions: VQZ300

**Single Unit**

- **Grommet (G): VQZ3□5□-□G□1-□02**

- **L-type plug connector (L): VQZ3□5□-□L□1-□02**

- **M-type plug connector (M): VQZ3□5□-□M□1-□03**

- **DIN terminal (Y): VQZ3□5□-□Y□1-□03**

#### Diagrams

- **Grommet (G):**
  - Approx. 300
  - Lead wire length
  - 1/4, 3/8
  - (2(A) port)
  - Manual override
  - 2 x ø4.5
  - (For mounting)
  - 1/4, 3/8
  - (1(P), 3(R) port)

- **L-type plug connector (L):**
  - Approx. 300
  - Lead wire length
  - 1/4, 3/8
  - (2(A) port)
  - 2 x ø4.5
  - (For mounting)

- **M-type plug connector (M):**
  - Approx. 300
  - Lead wire length
  - 1/4, 3/8
  - (2(A) port)
  - Manual override
  - 2 x ø4.5
  - (For mounting)

- **DIN terminal (Y):**
  - Length
  - 1/4, 3/8
  - (1(P), 3(R) port)

**Except otherwise indicated, dimensions are the same as Grommet (G).**
### 3 Port Solenoid Valve

#### VQZ100/200/300 Series

**Manifold**

**Connector Kit**

#### VQZ100 / How to Order Manifold

**Series**

- VV3QZ 1 5 08 C6 C

**Stations**

- 02: 2 stations
- 20: 20 stations

**Port size [2(A) port]**

- C6: ø6 One-touch fitting
- C4: ø4 One-touch fitting
- C3: ø3.2 One-touch fitting
- M5: M5 thread (Replaceable type)

**Manifold type**

- 5: Base mounted

**Kit type**

- C: Connector

**Option**

- D0: DIN rail mounting (Without DIN rail)
- R: External pilot type

**CE-compliant**

- Nil
- Q: CE-compliant

**Note 1)** Order DIN rail separately. For DIN rail part no., refer to page 1252.

**Note 2)** When two or more symbols are specified, indicate them alphabetically.

**Note 3)** For CE-compliant models, DC-type only.

#### VQZ100 / How to Order Valve

**Series**

- VQZ 1 1 5 5 M 1 C4

**Type of actuation**

- 1: N.C.

**Body type**

- 5: Base mounted

**Function**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>High pressure type</td>
<td></td>
<td>(0.35 W)</td>
</tr>
<tr>
<td>R</td>
<td>External pilot type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KR</td>
<td>High pressure/External pilot type</td>
<td></td>
<td>(0.77 W)</td>
</tr>
</tbody>
</table>

**Manual override**

- Nil: Non-locking push type (Tool required)
- B: Locking type (Tool required)

**Coil voltage**

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

**Electrical entry**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Electrical entry</th>
<th>Light/surge voltage suppressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Grommet (DC specification)</td>
<td>None</td>
</tr>
<tr>
<td>L</td>
<td>L-plug connector with lead wire</td>
<td>Yes</td>
</tr>
<tr>
<td>LO</td>
<td>L-plug connector without connector</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>M-plug connector with lead wire</td>
<td></td>
</tr>
<tr>
<td>MO</td>
<td>M-plug connector without connector</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1)** For AC specification power consumption, refer to page 1240.

**Note 2)** For details on external pilot type, refer to page 1253.

**Note 3)** For inch size One-touch fittings, refer to page 1253.

---

**Caution**

Use standard (DC) specification for continuous duty.

---

**Note 1)** When CP port plug is attached on all 2(A) port. Valve on manifold is top ported.

**Note 2)** Specify the mixture port (including top and side piping) by the manifold specification sheet.

**Note 3)** For inch size One-touch fittings, refer to page 1253.
VQZ100/200/300 Series

VQZ200/300 / How to Order Manifold

**VV3QZ 2 5 - 08 C6 C - -**

**Series**
- 2: VQZ200
- 3: VQZ300

**Manifold type**
- Base mounted

**Stations**
- 02: 2 stations
- 20: 20 stations

**Port size**
- [2(A) port]

**Symbols**
- C4: ø4 One-touch fitting
- C6: ø6 One-touch fitting
- C8: ø8 One-touch fitting
- C10: ø10 One-touch fitting
- O1: Rc 1/8
- O2: Rc 1/4
- CM (Note 1): Mixed port sizes

**Note 1)**
- Specify port mixture with port plug by means of the manifold specification sheet. Port mixture and port plug are available only for one-touch fitting type.
- For inch size One-touch fittings, refer to page 1253.

**Note 2)**
- For AC specification power consumption, refer to page 1240.

**Function**
- CE-compliant
- Nil
- Compliant

**Note)**
- AC-type models that are CE-compliant have DIN terminals only.

**Option**
- Nil
- D: DIN rail mounting (With standard DIN rail length)
- DD: DIN rail mounting (Without DIN rail)
- R: External pilot type

**Kit type**
- C Connector

**Series**
- 2: VQZ200 body width 15 mm
- 3: VQZ300 body width 18 mm

**Type of actuation**
- 1: N.C. Metal seal
- 2: N.O. Metal seal
- 3: N.C. Rubber seal
- 4: N.O. Rubber seal

**Manual override**
- Nil: Non-locking push type (Tool required)
- B: Locking type (Tool required)

**IP65 compliant**
- Nil: Non-compliant
- W: Compliant

**Electrical entry**
- Symbol
- Electrical entry
- G: Grommet (DC specification) $0.25 \text{ W}$
- L: L-type plug connector with lead wire
- M: M-type plug connector with lead wire
- MO: M-type plug connector without connector
- Y: DIN terminal
- YO: DIN terminal without connector
- YZ: DIN terminal
- YS: DIN terminal (DC specification) $0.3 \text{ W}$

**Note 1)**
- Standard lead wire length: 300 mm
- For AC voltage valves there is no "S" type. It is already built-in to the rectifier circuit.

**Coil voltage**
- 1: 100 VAC (50/60 Hz)
- 2: 200 VAC (50/60 Hz)
- 3: 110 VAC (115 VAC) (50/60 Hz)
- 4: 220 VAC (230 VAC) (50/60 Hz)
- 5: 24 VDC
- 6: 12 VDC

**Warning**
- Use standard (DC) specification for continuous duty.

Caution

Note 1)**
- For details on external pilot type, refer to page 1253.
- For AC type models that are CE-compliant have DIN terminals only.

Note 2)**
- For AC voltage valves there is no "S" type. It is already built-in to the rectifier circuit.

Note 3)**
- For AC specification power consumption, refer to page 1240.
Manifold Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Piping specifications</th>
<th>Applicable solenoid valve</th>
<th>Applicable stations</th>
<th>Manifold base weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VV3QZ15-05C6C</td>
<td>Side/Top Rc 1/8 C3 (for ø3.2) C4 (for ø4) C6 (for ø6) M5 (M5 thread)</td>
<td>VOZ115</td>
<td>2 to 20 stations</td>
<td>2 stations: 83 Addition per station: 19</td>
</tr>
<tr>
<td>VQZ200</td>
<td>VV3QZ25-10A-5</td>
<td>Side Rc 1/4 C4 (for ø4) C6 (for ø6) C8 (for ø8) Rc 1/8</td>
<td>VOZ2□5</td>
<td>2 to 20 stations</td>
<td>2 stations: 126 Addition per station: 38</td>
</tr>
<tr>
<td>VQZ300</td>
<td>VV3QZ35-05C8C</td>
<td>Side 1(P) port Rc 1/4 C6 (for ø6) C8 (for ø8) C10 (for ø10) Rc 1/4</td>
<td>VOZ3□5</td>
<td>2 to 20 stations</td>
<td>2 stations: 209 Addition per station: 60</td>
</tr>
</tbody>
</table>

Note) Weight for threaded connection.

How to Order Manifold Assembly (Example)

Example:
- VV3QZ25-05C6C ··· 1 set (C kit 5-station manifold base part no.)
- VVQZ200-10A-5 ··· 1 set (Blanking plate assembly part no.)
- VOZ215-5L1 ··· 4 sets (N.C. type part no.)

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

Enter in order starting from the first station on the D side.

Add the valve and option part number under the manifold base part number. When entry of part numbers becomes complicated, indicate by the manifold specification sheet.
VQZ100/200/300 Series

Dimensions: VQZ100: Top Ported

VV3QZ15- Stations Port size C

Grommet (G)

The dashed lines indicate the DIN rail mounting [-D].

M5

Approx. 300 (Lead wire length)

Port size

Dimensions

n: Stations (Max. 20 stations)
Dimensions: VQZ100: Side Ported

**VV3QZ15**

<table>
<thead>
<tr>
<th>Stations</th>
<th>Port size C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grommet (G)**

- **D side**
- **U side**

- **L1**
- **L2**

- **M5 x 0.8**
  - (X: External pilot port)
  - <For external pilot>

- **(Rail mounting hole pitch: 12.5)**
- **(Pitch)**
- **P = 10.5**

- **Manual override**

- **(DIN rail clamp thread)**
  - **Approx. 300**
  - **(Lead wire length)**

- **M5 x 0.8**
  - (PE: Pilot EXH port)

The dashed lines indicate the DIN rail mounting [D].

**L-type plug connector (L)**

- **Approx. 300**
- **(Lead wire length)**
- **[44.9 [47.1]]**

- **M5 x 0.8**

- **[2(A) port]**
  - **One-touch fitting**
  - **Applicable tubing O.D.: ø3.2, ø1/8', ø4, ø5/32' ø6, ø1/4'**

- **Unless otherwise indicated, dimensions are the same as Grommet (G).**

**M-type plug connector (M)**

- **Approx. 300**
- **(Lead wire length)**
- **[54.7 [56.9]]**

- **M5 x 0.8**

- **[2(A) port]**

- **Unless otherwise indicated, dimensions are the same as Grommet (G).**

**Dimensions**

<table>
<thead>
<tr>
<th>Station(s)</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>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>85.5</td>
<td>85.5</td>
<td>98</td>
<td>110.5</td>
<td>123</td>
<td>135.5</td>
<td>148</td>
<td>148</td>
<td>160.5</td>
<td>173</td>
<td>185.5</td>
<td>198</td>
<td>210.5</td>
<td>210.5</td>
<td>223</td>
<td>235.5</td>
<td>248</td>
<td>260.5</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>75</td>
<td>75</td>
<td>87.5</td>
<td>100</td>
<td>112.5</td>
<td>125</td>
<td>137.5</td>
<td>137.5</td>
<td>150</td>
<td>162.5</td>
<td>175</td>
<td>187.5</td>
<td>200</td>
<td>200</td>
<td>212.5</td>
<td>225</td>
<td>237.5</td>
<td>250</td>
<td>262.5</td>
<td></td>
</tr>
<tr>
<td>L3</td>
<td>43.5</td>
<td>54</td>
<td>64.5</td>
<td>75</td>
<td>85.5</td>
<td>96</td>
<td>106.5</td>
<td>117</td>
<td>127.5</td>
<td>138</td>
<td>148.5</td>
<td>159</td>
<td>169.5</td>
<td>180</td>
<td>190.5</td>
<td>201</td>
<td>211.5</td>
<td>222</td>
<td>232.5</td>
<td></td>
</tr>
<tr>
<td>L4</td>
<td>21</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>15.5</td>
<td>16.5</td>
<td>17.5</td>
<td>18.5</td>
<td>19.5</td>
<td>20.5</td>
<td>15.5</td>
<td>16.5</td>
<td>17.5</td>
<td>18.5</td>
<td>19.5</td>
<td>20.5</td>
<td></td>
</tr>
<tr>
<td>L5</td>
<td>30.5</td>
<td>41</td>
<td>51.5</td>
<td>62</td>
<td>72.5</td>
<td>83</td>
<td>93.5</td>
<td>104</td>
<td>114.5</td>
<td>125</td>
<td>135.5</td>
<td>146</td>
<td>156.5</td>
<td>167</td>
<td>177.5</td>
<td>188</td>
<td>198.5</td>
<td>209</td>
<td>219.5</td>
<td></td>
</tr>
</tbody>
</table>
VQZ100/200/300 Series

Dimensions: VQZ200

VV3QZ25- Stations Port size C

Grommet (G)

L1 L2 L5
42.4 57.8 88.4

Approx. 30082 (Lead wire length)

Max. 10

Applicable cable O.D. ø3.5 to ø7

1/8

2 x ø4.5 (For mounting)

Approx. 300

Manual override

(DIN rail clamp thread)

(DIN rail)

<For external pilot>

PE port

One-touch fitting

[2(A) port] Applicable tubing O.D.: ø4, ø5/32" ø6, ø1/4" ø8, ø5/16"

1/8

Pitch

P = 16

L1

L2

L5

L3

L4

Station 1) ---(Station n)

The dashed lines indicate the DIN rail mounting [-D].

L-type plug connector (L)

M-type plug connector (M)

DIN terminal (Y)

Unless otherwise indicated, dimensions are the same as Grommet (G).

[ ]: AC

Dimensions

<table>
<thead>
<tr>
<th></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>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>85.5</td>
<td>98</td>
<td>123</td>
<td>135.5</td>
<td>148</td>
<td>173</td>
<td>185.5</td>
<td>198</td>
<td>210.5</td>
<td>235.5</td>
<td>248</td>
<td>260.5</td>
<td>285.5</td>
<td>298</td>
<td>310.5</td>
<td>323</td>
<td>348</td>
<td>360.5</td>
<td>373</td>
</tr>
<tr>
<td>L2</td>
<td>75</td>
<td>87.5</td>
<td>112.5</td>
<td>125</td>
<td>137.5</td>
<td>162.5</td>
<td>175</td>
<td>187.5</td>
<td>200</td>
<td>225</td>
<td>237.5</td>
<td>250</td>
<td>275</td>
<td>287.5</td>
<td>300</td>
<td>312.5</td>
<td>337.5</td>
<td>350</td>
<td>362.5</td>
</tr>
<tr>
<td>L3</td>
<td>52</td>
<td>68</td>
<td>84</td>
<td>100</td>
<td>116</td>
<td>132</td>
<td>148</td>
<td>164</td>
<td>180</td>
<td>196</td>
<td>212</td>
<td>228</td>
<td>244</td>
<td>260</td>
<td>276</td>
<td>292</td>
<td>308</td>
<td>324</td>
<td>340</td>
</tr>
<tr>
<td>L4</td>
<td>17</td>
<td>15</td>
<td>19.5</td>
<td>16</td>
<td>16</td>
<td>20.5</td>
<td>19</td>
<td>17</td>
<td>15.5</td>
<td>20</td>
<td>16</td>
<td>16.5</td>
<td>21</td>
<td>19</td>
<td>17.5</td>
<td>15.5</td>
<td>20</td>
<td>18.5</td>
<td>16.5</td>
</tr>
<tr>
<td>L5</td>
<td>42</td>
<td>58</td>
<td>74</td>
<td>90</td>
<td>106</td>
<td>122</td>
<td>138</td>
<td>154</td>
<td>170</td>
<td>186</td>
<td>202</td>
<td>218</td>
<td>234</td>
<td>250</td>
<td>266</td>
<td>282</td>
<td>298</td>
<td>314</td>
<td>330</td>
</tr>
</tbody>
</table>

n: Stations (Max. 20 stations)

[2(A) port] X: External pilot port

[1(P), 3(R) port]

Manual override

(For external pilot)

2 x ø4.5 (For mounting)
Dimensions: VQZ300

VQ3QZ35- Stations Port size C

Grommet (G)

- Approx. 300 (Lead wire length)
- 2 x ø4.5 (For mounting)

L2
(Rail mounting hole pitch: 12.5)
(Pitch) P = 20
(DIN rail clamp thread)

L1

Manual override

(DIN rail)

L3

One-touch fitting

2(A) port

Applicable tubing O.D.: ø6, ø1/4" ø8, ø5/16" ø10, ø3/8"

L4

L5

Station (1) ------- (Station n)

D side

1/4

2(A) port

P = 20

Base Mounted VQZ100/200/300 Series
**Manifold Options**

**Blanking plate assembly**

- VVQZ100-10A-5 (for VQZ100)
- VVQZ200-10A-5 (for VQZ200)
- VVQZ300-10A-5 (for VQZ300)

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

**Blanking plug**

KQ2P-23  
KQ2P-04  
KQ2P-06  
KQ2P-08  
KQ2P-10

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>L</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>KQ2P-23</td>
<td>16</td>
<td>31.5</td>
<td>5</td>
</tr>
<tr>
<td>KQ2P-04</td>
<td>16</td>
<td>32</td>
<td>6</td>
</tr>
<tr>
<td>KQ2P-06</td>
<td>18</td>
<td>35</td>
<td>8</td>
</tr>
<tr>
<td>KQ2P-08</td>
<td>20.5</td>
<td>39</td>
<td>10</td>
</tr>
<tr>
<td>KQ2P-10</td>
<td>22</td>
<td>43</td>
<td>12</td>
</tr>
</tbody>
</table>

**DIN rail**

AXT100-DR-

As for □, enter the number from the DIN rail dimensions table.  
For L dimension, refer to the dimensions of each kit.

Each manifold can be mounted on a DIN rail.  
Insert “D” at the end of the manifold part number.  
The DIN rail is approximately 30 mm longer than the length of manifold.

**Silencer**

(for manifold EXH port)

Silencer is installed in the manifold EXH port.

**Port plug**

VVQZ100-CP (for VQZ100)

This is used when changing piping location. (Side or Top)
**VQZ Series**  
**Base Mounted**  
**Semi-standard Specifications**

### External Pilot Specification

The external pilot specification is used when the operating pressure is below the minimum operating pressure 0.1 to 0.15 MPa or when valve is used for a vacuum application. Order a valve by adding the external pilot specification [R] to the part number.

**Valve Part No.**

| VQZ | 5R | — | — | — | — |

**Manifold Part No.**

| VV3QZ | 5 | — | C | — | R | — |

- Entry is the same as standard products.
- CE-compliant

### Pressure Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>VQZ100 (Note 1)</th>
<th>VQZ200/300</th>
</tr>
</thead>
<tbody>
<tr>
<td>External pilot pressure range</td>
<td>—</td>
<td>0.1 to 0.7 MPa</td>
</tr>
<tr>
<td>Rubber seal (VQZ100: poppet)</td>
<td>0.2 to 0.7 MPa</td>
<td>0.15 to 0.7 MPa</td>
</tr>
<tr>
<td>Operating pressure range (Note 1)</td>
<td>—100 kPa to 0.7 MPa</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** In case of the high pressure type, upper limit of max. operating pressure and external pilot pressure range is 1 MPa.

**Note 2:** When using the VQZ100 series for a vacuum application, vacuum air through its 1(P) port. When supplying vacuum-release air, supply it through its 3(R) port. But do not supply vacuum-release air exceeding 50% for the external pilot pressure.

In addition, when the VQZ100 is to be used at an operating pressure greater than 0.2 MPa, please assure that the operating pressure is set to equal to or less than the external pilot pressure.

### Inch Size One-touch Fittings and Optional Threads

Inch size One-touch fittings and NPT, NPTF and G thread are available.

**Manifold Part No.**

| VV3QZ | 5 | — | N7 | T | C | — | — |

- Entry is the same as standard products.
- Cylinder port

<table>
<thead>
<tr>
<th>Symbol</th>
<th>N1</th>
<th>N3</th>
<th>N7</th>
<th>N9</th>
<th>N11</th>
<th>NM (Note 1)</th>
<th>M5</th>
<th>01</th>
<th>02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable tubing O.D.</td>
<td>ø1/8”</td>
<td>ø5/32”</td>
<td>ø1/4”</td>
<td>ø5/16”</td>
<td>ø3/8”</td>
<td>Mixed</td>
<td>M5 thread</td>
<td>1/8 thread</td>
<td>1/4 thread</td>
</tr>
<tr>
<td>Cylinder port</td>
<td>VQZ100</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>VQZ200</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>VQZ300</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

**Note 1:** Except VQZ100, mixing One-touch fittings and thread types is impossible.

**Note 2:** Metric size One-touch fittings (C) are also available.

### Optional Threads Other than Rc

Rc specifications are standard for all ports, however, NPT, NPTF and G are available for overseas markets. Add the appropriate symbol following the port size in the standard part number.

**Valve Part No.**

| VQZ | 5 | — | — | — | — | — |

- Entry is the same as standard products.

### IP65 Enclosure (Based on IEC60529)

DIN terminal is available with IP65 enclosure.

**Valve Part No.**

(Applicable to the VQZ200/300 rubber seal with the exception of the external pilot type)

| VQZ | 5 | — | Y | W1 | — | — |

- Entry is the same as standard products.
- CE-compliant

**Note:** The pilot exhaust IP65 valves is common with main valve exhaust. (The standard valve has an individual exhaust for the pilot valve.)

---

[Table and diagram details from the original text]
**VQZ Series**

**Base Mounted**

**Replacement Parts**

---

### One-touch Fitting Assembly (for Cylinder port)

<table>
<thead>
<tr>
<th>Model</th>
<th>Fitting size</th>
<th>C3</th>
<th>C4</th>
<th>C6</th>
<th>C8</th>
<th>C10</th>
<th>M5 (VQZ100 only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VVQ100-50A-C3</td>
<td>VVQ100-50A-C4</td>
<td>VVQ100-50A-C6</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>VQZ200</td>
<td>—</td>
<td>VVQ200-51A-C4</td>
<td>VVQ200-51A-C6</td>
<td>VVQ200-51A-C8</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>VQZ300</td>
<td>—</td>
<td>—</td>
<td>VVQ200-51A-C6</td>
<td>VVQ200-51A-C8</td>
<td>VVQ200-51A-C10</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: Purchasing order is available in units of 10 pieces.

---

### Plug connector assembly

<table>
<thead>
<tr>
<th>DC: SY100-30-4A-</th>
<th>100 VAC: SY100-30-1A-</th>
<th>200 VAC: SY100-30-2A-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other AC voltages: SY100-30-3A-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Without lead wire: SY100-30-A (with connector and 2 sockets only)

- **Lead wire length**
  - Nil: 300 mm
  - 6: 600 mm
  - 10: 1000 mm
  - 15: 1500 mm
  - 20: 2000 mm
  - 25: 2500 mm
  - 30: 3000 mm
  - 50: 5000 mm

---

### Pilot valve assembly

- **V111**

- **Function**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Standard</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>B</td>
<td>High speed response type (Applicable to VQZ200/300)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>K</td>
<td>High pressure type (Applicable to Metal seal type, Poppet seal type)</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

- **Manual override**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>None (Applicable to VQZ220/300)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M</td>
<td>Yes (Applicable to VQZ100)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

---

### DIN terminal type (Applicable to the VQZ200/300)

- **V115**

- **Function**

- **Coil voltage**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>DIN terminal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>YO</td>
<td>DIN terminal without connector</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>YZ</td>
<td>DIN terminal with light/surge voltage suppressor</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- **Electrical entry**

- **Light/surge voltage suppressor**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Specifications</th>
<th>DC</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>DIN terminal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>YO</td>
<td>DIN terminal without connector</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>YZ</td>
<td>DIN terminal with light/surge voltage suppressor</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: The electrical entry (L, M) for the VQZ100 pilot valve is different from that of the main valve model number.

---

### Gasket and screw assembly

<table>
<thead>
<tr>
<th>Model</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VQZ100-GS-5</td>
</tr>
<tr>
<td>VQZ200</td>
<td>VQZ200-GS-5</td>
</tr>
<tr>
<td>VQZ300</td>
<td>VQZ300-GS-5</td>
</tr>
</tbody>
</table>

Note: The above part numbers are for 10 valves (a set of 10 gaskets and 20 screws).

---

### Sub-plate

<table>
<thead>
<tr>
<th>Model</th>
<th>Sub-plate part no.</th>
<th>For internal pilot</th>
<th>For external pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VQZ100-01(-Q)</td>
<td>VQZ100-01(-Q)</td>
<td>-(-Q)</td>
</tr>
<tr>
<td>VQZ200</td>
<td>VQZ200-02(-Q)</td>
<td>VQZ200-02(-Q)</td>
<td>-(-Q)</td>
</tr>
<tr>
<td>VQZ300</td>
<td>VQZ300-03(-Q)</td>
<td>VQZ300-03(-Q)</td>
<td>-(-Q)</td>
</tr>
</tbody>
</table>

* Thread type

---

**Caution**

When replacing only the pilot valve assembly, use caution because it is not possible to convert to a V115 (DIN terminal) from a V111 (Grommet, L-type, M-type), or vice versa.
1 Pilot Valve Common Exhaust Specification

Pilot exhaust is exhausted through the main R port.
* Not designed to prevent leakage to outside.
* A combination of external pilots is not available.
* “How to Order Manifold” is the same as standard products. Please specify this to “How to Order Valve.”

Applicable solenoid valve series: VQZ200/300

<table>
<thead>
<tr>
<th>VQZ</th>
<th>X30</th>
<th>CE-compliant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nil</td>
</tr>
</tbody>
</table>

 Entry is the same as standard products.

2 Main Valve Fluororubber Specification

The seal material, the part of the main valve in contact with fluid, is made of fluororubber.
* “How to Order Manifold” is the same as standard products. Please specify this to “How to Order Valve.”

Applicable solenoid valve series: VQZ200/300

<table>
<thead>
<tr>
<th>VQZ</th>
<th>X90</th>
<th>CE-compliant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nil</td>
</tr>
</tbody>
</table>

 Seal type

<table>
<thead>
<tr>
<th></th>
<th>N.C. Rubber seal</th>
<th>N.O. Rubber seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

 Entry is the same as standard products.

3 All Fluororubber Specification

The rubber material of the part in contact with fluid, is made of fluororubber.
* “How to Order Manifold” is the same as standard products. Please specify this to “How to Order Valve.”

Applicable solenoid valve series: VQZ200/300

<table>
<thead>
<tr>
<th>VQZ</th>
<th>X113</th>
<th>CE-compliant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nil</td>
</tr>
</tbody>
</table>

 Entry is the same as standard products.
## VQZ Series
### Specific Product Precautions 1

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 9 for 3/4/5 Port Solenoid Valve Precautions.

### Manual Override

**Caution**
Without an electric signal for the solenoid valve the manual override is used for switching the main valve. Push type is standard. Locking type (Tool required) is available as an option.

1. **VQZ100**
   - Push type
     - Press in the direction of the arrow.
   - Locking type (Tool required)
     - Turn 90° in the direction of arrow.

2. **VQZ200/300**
   - 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 type (Tool required)
     - 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.

**Precautions**
When operating with a screwdriver, turn it gently using a watchmaker’s screwdriver. (Torque: less than 0.1 N·m) Press and rotate to lock the manual operation of VQZ200/300. If rotate without pressing, manual breakage and air leakage could be occurred.

### How to Use L/M-Type Plug Connector

**Caution**
1. **Attaching and detaching connectors**
   - To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve and remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.

**Light/Surge Voltage Suppressor**

**Caution**
1. **L/M-type plug connector**
   - **<DC>**
   - **<AC>**

2. **DIN terminal**
   - **With surge voltage suppressor (YS, YOS)**
   - **Light/surge voltage suppressor (YZ)**

**<AC>**
- **With light (YZ)**

*Note* Surge voltage suppressor of varistor has residual voltage corresponding to the protective element and rated voltage; therefore, protect the controller side from the surge.*
**Lead Wire Connection**

<table>
<thead>
<tr>
<th><strong>Caution</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Crimping of lead wires and sockets</strong></td>
</tr>
<tr>
<td>Not necessary if ordering the lead wire pre-connected model. Strip 3.2 to 3.7 mm at the end of the lead wires, insert the ends of the core wires evenly into the sockets, and then crimp with a crimping tool. When this is done, take care that the coverings of the lead wires do not enter the core wire crimping area. (Please contact SMC for the crimping tools.)</td>
</tr>
</tbody>
</table>

![Crimping Diagram](image)

| **2. Attaching and detaching sockets with lead wires** |
| **Attaching** |
| Insert the sockets into the square holes of the connector (indication), and continue to push the sockets all the way in until they lock by hooking into the seats in the connector. (When they are pushed in, their hooks open and they are locked automatically.) Then, confirm that they are locked by pulling lightly on the lead wires. |

| **Detaching** |
| To detach a socket from a connector, pull out the lead wire while pressing the socket’s hook with a stick having a thin tip (approx. 1 mm). If the socket will be used again, first spread the hook outward. |

**Pilot Valve Replacement**

| **Caution** |
| **1. When replacing a current type valve with a new type for maintenance or other reasons, a “conversion connector assembly” is necessary to convert the connector from 3 terminals to 2 terminals and must be ordered separately. (When ordering, refer to the below part nos.)** |
| For pilot valves, there is no compatibility between the current type and new type. When replacing a pilot valve, be sure to confirm whether it is the new type or the current type. |

![Conversion Connector Assembly Diagram](image)

**Connector**

**Lead wire**

**Socket**

**Hook**

**Crimping area**

**Core wire**

**Insulation**

**Manual override (Blue)**

**Pilot valve (VQ111)**

**Adapter plate**

**Conversion connector assembly**

**VQZ1000V-85-A**

**Coil voltage**

- 1: 24/12 VDC
- 2: 100 VAC
- 3: 200 VAC
- 4: Other AC voltages
**How to Use DIN Terminal**

1. **EN-175301-803C (Former DIN 43650C)**
   
   (8 mm between pins)
   
   The DIN terminal type with an IP65 enclosure is protected against dust and water, however, it must not be used in water.

2. **Connection**
   
   1) Loosen the holding screw and pull the connector out of the solenoid valve terminal block.
   
   2) After removing the holding screw, insert a flat head screwdriver, etc., into the notch on the bottom of the terminal block and pry it open, separating the terminal block and the housing.
   
   3) Loosen the terminal screws (slotted screws) on the terminal block, insert the cores of the lead wires into the terminals according to the connection method, and fasten them securely with the terminal screws.
   
   4) Secure the cord by fastening the ground nut.

3. **Changing the entry direction**
   
   After separating the terminal block and housing, the cord entry can be changed by attaching the housing in the desired direction (4 directions at 90° intervals).
   
   * When equipped with a light, be careful not to damage the light with the cord’s lead wires.

4. **Precautions**
   
   Plug in and pull out the connector vertically without tilting to one side.

5. **Compatible cable**
   
   Cable O.D.: ø3.5 to ø7
   
   (Reference) 0.5 mm², 2-core or 3-core, equivalent to JIS C 3306

**DIN Connector Part No.**

<table>
<thead>
<tr>
<th>Without light</th>
<th>With light</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>Voltage symbol</td>
</tr>
<tr>
<td>All voltages</td>
<td>None</td>
</tr>
<tr>
<td>24 VDC</td>
<td>24 V</td>
</tr>
<tr>
<td>12 VDC</td>
<td>12 V</td>
</tr>
<tr>
<td>100 VAC</td>
<td>100 V</td>
</tr>
<tr>
<td>200 VAC</td>
<td>200 V</td>
</tr>
<tr>
<td>220 VAC (230 VAC)</td>
<td>220 V</td>
</tr>
</tbody>
</table>

**Circuit diagram with light**

**Fitting and Silencer Part No. for P, R Ports When Using Valve as an Individual Unit**

<table>
<thead>
<tr>
<th>Series</th>
<th>(1) One-touch fitting for 1(P) port</th>
<th>(2) For 3(R) port</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>KG2H06-5SA</td>
<td>AN120-M5</td>
</tr>
<tr>
<td>VQZ200</td>
<td>KG2S06-01AS</td>
<td>INA-25-46</td>
</tr>
<tr>
<td>VQZ300</td>
<td>KG2H08-02AS</td>
<td>AN101-01</td>
</tr>
</tbody>
</table>

The part no. for one-touch fitting for 1(P) port and silencer/one-touch fitting for 3(R) port.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V</td>
<td>SY100-82-3-05</td>
</tr>
<tr>
<td>12 V</td>
<td>SY100-82-3-06</td>
</tr>
<tr>
<td>100 V</td>
<td>SY100-82-2-01</td>
</tr>
<tr>
<td>200 V</td>
<td>SY100-82-2-02</td>
</tr>
<tr>
<td>220 V</td>
<td>SY100-82-2-04</td>
</tr>
</tbody>
</table>

The diameter of the above fitting and silencer is the maximum diameter to the EXH port.
**VQZ Series**

**Specific Product Precautions 4**

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 9 for 3/4/5 Port Solenoid Valve Precautions.

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### One-touch Fittings Replacement

**Caution**

The built-in fittings on the manifold can be changed easily. Simply remove the corresponding valve and take out the fitting clip underneath.

Take out the clip with a screwdriver, etc., then replace the fittings. About mounting the fittings, after inserting the fitting until it stops, then put the clip into the prescribed position.

VQZ200: Horizontally clipped to the valve body
VQZ100/300: Vertically clipped to the valve body

#### Valve

![Clip](VQZ-clip.png)

Valve Clip Part No. (10 pcs. included)

<table>
<thead>
<tr>
<th>Series</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>VQZ100-2-FC</td>
</tr>
<tr>
<td>VQZ200</td>
<td>VQZ200-2-FC</td>
</tr>
<tr>
<td>VQZ300</td>
<td>VQZ300-2-FC</td>
</tr>
</tbody>
</table>

#### Manifold base

![Base Clip](VQZ-base-clip.png)

Base Clip Part No. (10 pcs. included)

<table>
<thead>
<tr>
<th>Series</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>VV3QZ15</td>
<td>VQZ100-5-FC</td>
</tr>
<tr>
<td>VV3QZ25</td>
<td>VQZ200-5-FC</td>
</tr>
<tr>
<td>VV3QZ35</td>
<td>VQZ300-5-FC</td>
</tr>
</tbody>
</table>

**Precautions**

When pulling the fitting assembly away from the valve base, remove the clip, then connect a tube or plug (KQ2P-□□□) with the One-touch fitting and pull it out holding the tube or plug. Do not hold the release bushing to avoid damage.

### DIN Rail Removal/Mounting

**Caution**

1. Removing
   1) Loosen the clamp screw on the □ side of both ends of the manifold.
   2) Lift the □ side of the manifold off the DIN rail and slide it in the direction of the □ side.

2. Mounting
   1) Catch the hook of the DIN rail bracket on the □ side on the DIN rail.
   2) Push side □ onto the DIN rail and tighten the clamp screw. The proper tightening torque for screws is 0.3 to 0.4 N-m.

### Valve Mounting

**Caution**

1. After confirming the gasket is correctly placed under the valve, securely tighten the bolts with the proper torque shown in the table below.

<table>
<thead>
<tr>
<th>Model</th>
<th>Proper tightening torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQZ100</td>
<td>0.13 to 0.19 N·m</td>
</tr>
<tr>
<td>VQZ200</td>
<td>0.25 to 0.35 N·m</td>
</tr>
<tr>
<td>VQZ300</td>
<td>0.5 to 0.7 N·m</td>
</tr>
</tbody>
</table>

### VQZ100 Piping Direction Replacement

**Caution**

1. How to replace the port direction

Fitting and port plug are modules. After removing the clip with a flat head screwdriver, take out the fitting and port plug. The piping direction (side or top) can be altered by exchanging the fitting and port plug. During exchange, insert the fitting and the port plug until they contact the wall, then, insert the clip to specified position.

**Precautions**

The clip length for the valve and the base are different. Fitting may detach if the incorrect clip is used.

2. Valve piped on top can be operated independently by using PR plate.

(Refer to the below part numbers when placing an order.)

- VQZ100-12A (Standard)
- VQZ100-12B (External pilot type)
  - 2 set screws are included.