4 Port Solenoid Valve

Series VQD1000

Rubber Seal Direct Operated Poppet Type

Unprecedented high speed, with stable response times
ON: 4 ms, OFF: 2 ms, Dispersion accuracy
±1 ms (With light/surge voltage suppressor at a supply pressure of 0.5 MPa)
(Use clean and dry air.)

Available in vacuum applications
(Up to –101.2 kPa)
(Valve leakage: 0.03 cm³/s He or less)
Can be used in vacuum/release circuits
When used as a 3 port valve, conversion from N.O. to N.C. and vice versa is possible by plugging either port 4(A) or 2(B).

Compact and lightweight (34 g) with large flow capacity
Body width of 10 mm, C: 0.22 dm³/(s·bar) 2 W
C: 0.27 dm³/(s·bar) 3.2 W (U type: Large flow)

Clean room specifications available as special.
Since the main valve has no sliding seals, non-oil treatment specification at the fluid contacting section is available (Made-to-Order part no. X16). The external non-leak specification is also available (Series 10+).

Copper-free specifications
The fluid contacting section is copper-free and the standard style can be used as it is.

Cylinder Speed Chart

Use as a guide for selection.
Please confirm the actual conditions with SMC Sizing Program.

<table>
<thead>
<tr>
<th>Base Mounted</th>
<th>Series</th>
<th>Average speed (mm/s)</th>
<th>Bore size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series CJ2</td>
<td></td>
<td>Pressure: 0.5 MPa</td>
<td>Ø6 Ø10 Ø16 Ø20 Ø25 Ø32 Ø40</td>
</tr>
<tr>
<td>Load factor 50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke 60 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series CM2</td>
<td></td>
<td>Pressure: 0.5 MPa</td>
<td></td>
</tr>
<tr>
<td>Load ratio 50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke 300 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VQD1151U

Use as a guide for selection.
Please confirm the actual conditions with SMC Sizing Program.

Conditions

<table>
<thead>
<tr>
<th>Base mounted</th>
<th>Series CJ2</th>
<th>Series CM2</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQD1151U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load factor 50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed controller: AS1201F-M5-04 AS2201F-02-04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.
* The average velocity of the cylinder is what the stroke is divided by the total stroke time.
* Load factor: (Load weight x 9.8)/Theoretical force x 100%

VV061
V100
S070
VQD
VKF
VK
VT
VS
VV061
V100
S070
VQD
VKF
VK
VT
VS
VV061
V100
S070
VQD
VKF
VK
VT
VS
# 4 Port Solenoid Valve
## Direct Operated Poppet Type

### Series VQD1000

#### How to Order Valves

| VQD1 | 1 | 5 | 1 | - | 5 | L | - | - |

**Type of actuation**

1. Single type
   - (A) 4
   - (B) 2

2. Latching type
   - (A) 4
   - (B) 2

**Body type**

- 2: Body ported (Single unit)
- 3: Body ported (Manifold)
- 4: Base mounted

**Valve option**

- Nil: Standard
- V: Vacuum
- U: For large flow
- W: For large flow, vacuum

*Note 1) Latching type: U and W only
Note 2) Latching type (-COM): NU and NW

**Made to Order**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Body ported</th>
<th>Base mounted</th>
</tr>
</thead>
<tbody>
<tr>
<td>X16</td>
<td>M5</td>
<td>M5 thread</td>
</tr>
<tr>
<td></td>
<td>Nil</td>
<td>Without sub-plate (Manifold)</td>
</tr>
</tbody>
</table>

**Electrical entry**

- L: Plug lead type
  - L plug connector, With lead wire
  - With light/surge voltage suppressor

- LO: Plug lead type
  - L plug connector, Without connector
  - With light/surge voltage suppressor

- M: Plug lead type
  - M plug connector, With lead wire
  - With light/surge voltage suppressor

- MO: Plug lead type
  - M plug connector, Without connector
  - With light/surge voltage suppressor

*Note 1) When you expect to energize the unit for extended periods of time, refer to page 3 for details.

**Rated voltage**

- 5: 24 VDC
- 6: 12 VDC

*Note) Latching type: 24 VDC only

### Standard Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Standard single type (2W)</th>
<th>Large-flow single type (32W/Energy saving type)</th>
<th>Large-flow latching type (2W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve construction</td>
<td>4 port direct operated poppet valve</td>
<td>4 port direct operated poppet valve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluid</td>
<td>Air/Nitrogen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum operating pressure</td>
<td>0.7 MPa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum operating pressure/Vacuum</td>
<td>0 MPa/–101.2 kPa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response time [1]</td>
<td>ON: 4 ms, OFF: 2 ms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient and fluid temperature</td>
<td>–10 to 50°C [2]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>No required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual override</td>
<td>Non-locking push type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock/Vibration resistance [3]</td>
<td>150/30 m/s²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting position</td>
<td>Unrestricted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosure</td>
<td>Dust tight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>34 g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coil rated voltage</td>
<td>DC 24 V, 12 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowable voltage fluctuation</td>
<td>±10% of rated voltage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coil insulation type</td>
<td>Class B or equivalent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>DC 2 W</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical entry</td>
<td>L plug connector, M plug connector</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note 1) Based on JIS B 8375-1981. Factor: With light/surge voltage suppressor (Use clean air).
Note 2) Dispersion accuracy: ±1 ms
Note 3) 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. (Values at the initial period)

**Vibration resistance:**
- No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)
4 Port Solenoid Valve
Direct Operated Poppet Type Series VQD1000

Flow Characteristics

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Port size</th>
<th>Flow characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>C [cm³/min at 1 bar]</td>
</tr>
<tr>
<td>Body ported</td>
<td>M5 x 0.8</td>
<td>0.22</td>
</tr>
<tr>
<td>VQD1121-M5</td>
<td></td>
<td>0.27</td>
</tr>
<tr>
<td>Base mounted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(With sub-plate)</td>
<td>VQD1151-M5</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>VQD1151-M5</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Construction

Component Parts (Single Type)

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solenoid coil assembly</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sub-plate</td>
<td>Aluminum</td>
<td>VQD1000-S-M5 (Base mounted only)</td>
</tr>
<tr>
<td>3</td>
<td>Body</td>
<td>ZOC</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Spool valve</td>
<td>Aluminum</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Poppet</td>
<td>HNBR</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Guide ring</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Manual override</td>
<td>Aluminum</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Gasket</td>
<td>HNBR</td>
<td>VQD1000-9-1H</td>
</tr>
<tr>
<td>10</td>
<td>Round head combination screw</td>
<td>Steel</td>
<td>AXF632-7-13 (M1.7 x 18)</td>
</tr>
</tbody>
</table>

Note: Body cannot be disassembled.

Valve Single Unit Option

Piping plate assembly VQD1000-20A

Manifold type (VQD1131) can be changed to single unit type (VQD1121) by mounting plate assembly.

Note: Plate should be mounted with manifold mounting screws (M1.7 x 20). Proper tightening torque of thread: 0.18 to 0.25 Nm
Series VQD1000

Dimensions/Body Ported

L plug connector: VQD1121□-□L-M5
M plug connector: VQD1121□-□M-M5

---

Lead wire length 300 mm

2 x M5 x 0.8
4(A), 2[B] port

Direct manual override

2 x ø3.5 mounting hole

L plug connector (L)

M plug connector (M)

---

2 x M5 x 0.8
1(P), 3[R] port

---

SMC
4 Port Solenoid Valve  
Direct Operated Poppet Type  
Series VQD1000

Dimensions/Base Mounted

L plug connector: VQD1151□□L-M5
M plug connector: VQD1151□□M-M5

---

L plug connector (L)

M plug connector (M)

Lead wire length 300 mm
Indicator light
2 x ø3.5 mounting hole
Direct manual override

4 x M5 x 0.8
1(P), 4(A), 2(M), 3(2) port

50.5
Series VQD1000

Dimensions/Base Mounted

L plug connector: VQD1251□-□L-M5
M plug connector: VQD1251□-□M-M5

- Lead wire: White
- Lead wire: Red
- Lead wire: Black

* In the case of +COM

Direct manual override

Indicator light

2 x ø3.5 mounting hole

Lead wire length 300 mm

4 x M5 x 0.8
1 (P), 4 (A), 2 (B), 3 (R) port

- The dashed line indicates L plug connector.
How to Order Manifold

Plug lead unit manifold

VV4QD1 5

Manifold

2 Body ported
5 Base mounted

Valve station

2 2 stations
20 20 stations (Max.)

Cylinder port

(Base mounted only)

M5 M5 thread
C4 One-touch fitting for ø4
1(P), 3(R) port: Rc 1/8

How to Order Manifold Assembly

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

Example:
Plug lead unit manifold
VV4QD15-05M5 — 1 set — Manifold base part no.
VVQD1000-10A-5 — 1 set — Blanking plate part no. (1st station)
VQD1151-5L — 4 sets — Valve part no. (2 to 5th station)

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

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

How to Order Valves

VQD1 1 5 1 — 5 L — M5

Type of actuation
1 Single type
2 Latching type

Body type
3 Body ported
5 Base mounted

Note) Latching type: Base-mounted type only.

Valve option

Nil Standard (2W)
V Vacuum (2 W)
U For large flow (3.2 W)
W For large flow, vacuum (3.2 W)

Note 1) Latching type: U and W only
Note 2) Latching type (-COM): NU and NW

Rated voltage

5 24 VDC
6 12 VDC

Electrical entry

L: Plug lead type
L plug connector, With lead wire
With light/surge voltage suppressor

LO: Plug lead type
L plug connector, Without connector
With light/surge voltage suppressor

M: Plug lead type
M plug connector, With lead wire
With light/surge voltage suppressor

MO: Plug lead type
M plug connector, Without connector
With light/surge voltage suppressor

Port size

(Body ported only)

M5 M5 thread
**Series VQD1000**

**Manifold Option**

**Blanking plate assembly/Body ported**

**VVQD1000-10A-2**

Blanking plate assembly includes 2 screws and gasket

**Blanking plate assembly/Base mounted**

**VVQD1000-10A-5**

Blanking plate assembly includes 2 screws and gasket

**Individual SUP spacer/Base mounted**

**VVQD1000-P-M5-5**

Mount the individual SUP spacer on the manifold base, and thus making it possible to have supply port individually for each valve.

Individual SUP spacer with screw (2 pcs.) and gasket

**Individual EXH spacer/Base mounted**

**VVQD1000-R-M5-5**

Mount the individual EXH spacer on the manifold base, and thus making it possible to have exhaust port individually for each valve. (Common EXH type)

Individual EXH spacer with screw (2 pcs.) and gasket
4 Port Solenoid Valve
Direct Operated Poppet Type Series VQD1000

Dimensions/Body Ported
Plug lead unit manifold (VV4QD12-□)

M plug connector (M)

L plug connector (L)

Dimensions

|      | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| L1   | 28 | 39 | 50 | 61 | 72 | 83 | 94 | 105| 116| 127| 138| 149| 160| 171| 182| 193| 204| 215| 226| 237|
| L2   | 20 | 31 | 42 | 53 | 64 | 75 | 86 | 97 | 108| 119| 130| 141| 152| 163| 174| 185| 196| 207| 218| 229|
Series VQD1000

Dimensions/Base Mounted

Plug lead manifold unit (VV4QD15-□)

<table>
<thead>
<tr>
<th>L</th>
<th>0</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>39</td>
<td>50</td>
<td>61</td>
<td>72</td>
<td>83</td>
<td>94</td>
<td>105</td>
<td>116</td>
<td>127</td>
<td>138</td>
<td>149</td>
<td>160</td>
<td>171</td>
<td>182</td>
<td>193</td>
<td>204</td>
<td>215</td>
<td>226</td>
<td>237</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>31</td>
<td>42</td>
<td>53</td>
<td>64</td>
<td>75</td>
<td>86</td>
<td>97</td>
<td>108</td>
<td>119</td>
<td>130</td>
<td>141</td>
<td>152</td>
<td>163</td>
<td>174</td>
<td>185</td>
<td>196</td>
<td>207</td>
<td>218</td>
<td>229</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Series VQD1000**

**Specific Product Precautions 1**

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

---

**Manual Override Operation**

**Warning**

Connected actuator is started by manual operation. Use the manual override after confirming that there is no danger.

- Single type: Non-locking push type (Tool required)

- Latching type: Locking type (Tool required)

---

**Warning**

- When tighten the piping, clamp the body part in order not to apply force to coil. (Latching: 50 N or more)
- If you apply force over 120 N to coil, connection pins deform, which may cause malfunction.

---

**Continuous Energization**

**Warning**

- Coil temperature may get high due to ambient temperature or energizing duration. Do not touch the valve by hand directly.
- When there is such a dangerous case to be touched by hands directly, install a protective cover.
- When you expect to energize the single type for extended periods of time, refer to page 3 for details.
- The latching type should not be energized over 30 seconds. Be sure to wait more than you energize the unit before you move on to the next operation.
- When it is the manifold and the adjacent valve is continuously energized, align them so that they would be energized or de-energized alternately.

---

**Mounting of Valves**

**Warning**

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

| Proper tightening torque (N·m) | 0.18 to 0.25 |

---

**Wiring Specifications**

- Single type (Standard: 2 W)
- Single type (Large flow: 3.2 W)
- Latching solenoid type
- Positive common
- Negative common

---

**Mounting of Valves**

**Caution**

- When tighten the piping, clamp the body part in order not to apply force to coil. (Latching: 50 N or more)
- If you apply force over 120 N to coil, connection pins deform, which may cause malfunction.

---

**Warning**

Connected actuator is started by manual operation. Use the manual override after confirming that there is no danger.

- Single type: Non-locking push type (Tool required)

- Latching type: Locking type (Tool required)
**Caution**

*Latching Type*

The latching is equipped with a self-holding mechanism, which permits a movable iron core in the solenoid to hold the set (A-ON) and reset (B-ON) positions during momentary energization (50 ms or longer). Therefore, there is no need to energize continuously.

< Special Cautions for Latching >

1. Use in a circuit that does not have simultaneous energization of A-ON and B-ON signals.
2. The minimum energization time required for self-holding is 50 ms.
3. Although there is no problem for normal operations and environments, please consult SMC when operating in an environment with vibration (10G or more) or strong magnetic fields.
4. When there is the magnetic body at the valve side, it may cause malfunction.
   Allow a space over 10 mm between the valve and magnetic body.
5. Even though this valve is held on to B-ON position (passage: P → B), it may switch to the set position during transportation or due to impact when mounting valves, etc.
   Therefore, check the initial position by means of power supply or manual override prior to use.

<table>
<thead>
<tr>
<th>Energization</th>
<th>Passage</th>
<th>Light color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-ON (Set)</td>
<td>A (-) Black</td>
<td>Red</td>
</tr>
<tr>
<td>B-ON (Reset)</td>
<td>B (+) White</td>
<td>Red</td>
</tr>
</tbody>
</table>

Note) For positive common

---

**How to Use Plug Connector**

**Caution**

*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 so that the lever’s pawl is pushed into the groove and locks.
- To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.

Note) GENTLY pull the lead wire, otherwise it may cause contact failure or disconnection.

---

**How to Use the Valve for Vacuum Applications** *(When used as a 3 port valve)*

**Caution**

Application example of "VOD1 3/2" (Symbols used are typical examples.)

- Use a VOD1 3/2 valve for vacuum applications.
- Connect the vacuum source to the 3(R) port.
- Air pressure cannot be applied to the 3(R) port.
- When used as a 3 port valve, conversion from N.O. to N.C. and vice versa is possible by plugging either port 4(A) or 2(B).
- Cannot be used as 2 port valve.

**How to Calculate the Flow Rate**

For obtaining the flow rate, refer to front matters 44 to 47.
## Series 10-VQD1000

### 4 port direct operated poppet solenoid valve

### How to Order Valves

<table>
<thead>
<tr>
<th>Clean series</th>
<th>Valve option</th>
<th>Rated voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body type</td>
<td>Valve body ported (Single unit)</td>
<td>Standard (2W)</td>
</tr>
<tr>
<td>5 — Base mounted</td>
<td>Vacuum (2W)</td>
<td>12 VDC</td>
</tr>
<tr>
<td>Power saving</td>
<td>For large flow (3.2W)</td>
<td>4-20 mA</td>
</tr>
<tr>
<td>U — For large flow, Vacuum (3.2W)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>+</td>
<td>Please consult with SMC for other voltages.</td>
<td></td>
</tr>
</tbody>
</table>

### Standard specifications

#### Flow characteristics

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Port size</th>
<th>Flow characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-VQD1121L-M5</td>
<td>M5 x 0.8</td>
<td>10-4/2(1/3-2/3) (2W)</td>
</tr>
<tr>
<td>10-VQD1121L-M5</td>
<td>M5 x 0.8</td>
<td>5/4/5(A/B) (3.2W)</td>
</tr>
<tr>
<td>10-VQD1151L-M5</td>
<td>M5 x 0.8</td>
<td>5/4/5(A/B) (3.2W)</td>
</tr>
<tr>
<td>10-VQD1151L-M5</td>
<td>M5 x 0.8</td>
<td>5/4/5(A/B) (3.2W)</td>
</tr>
</tbody>
</table>

### Electrical entry

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Electrical entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>L plug connector</td>
<td>L plug connector, With lead wire</td>
</tr>
<tr>
<td>L plug connector</td>
<td>L plug connector, Without lead wire</td>
</tr>
<tr>
<td>M plug connector</td>
<td>M plug connector, With lead wire</td>
</tr>
<tr>
<td>M plug connector</td>
<td>M plug connector, Without lead wire</td>
</tr>
</tbody>
</table>

### Standard specifications

<table>
<thead>
<tr>
<th>Items</th>
<th>Type</th>
<th>Large flow type (3.2 W / Energy saving type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve model</td>
<td>Port size</td>
<td>Flow characteristics</td>
</tr>
<tr>
<td>Valve construction</td>
<td>Standard type (2W)</td>
<td>Large flow type</td>
</tr>
<tr>
<td>Fluid</td>
<td>Air/inert gas</td>
<td>4 port direct operated poppet valve</td>
</tr>
<tr>
<td>Maximum operating pressure</td>
<td>0.7MPa</td>
<td>0MPa/10Torr</td>
</tr>
<tr>
<td>Minimum operating pressure</td>
<td>0MPa/10Torr</td>
<td>0MPa/10Torr</td>
</tr>
<tr>
<td>Response time</td>
<td>ON:4ms, OFF:2ms</td>
<td>ON:4ms, OFF:2ms</td>
</tr>
<tr>
<td>Ambient and fluid temperature</td>
<td>−10 to 50°C Note 1)</td>
<td>−10 to 50°C Note 1)</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required</td>
<td>Not required</td>
</tr>
<tr>
<td>Manual override</td>
<td>Non-locking push type</td>
<td>Non-locking push type</td>
</tr>
<tr>
<td>Impact / Vibration resistance</td>
<td>150/30m/s² Note 1)</td>
<td>150/30m/s² Note 1)</td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>Unrestricted</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Enclosure</td>
<td>Dust tight</td>
<td>Dust tight</td>
</tr>
<tr>
<td>Weight</td>
<td>34g (without sub-plate)</td>
<td>34g (without sub-plate)</td>
</tr>
</tbody>
</table>

### Note

- Based on JIS B 8375-1981. With light/surge voltage suppressor (Use clean air). Dispersion accuracy: ±1 ms.
- Use dry air to prevent condensation when operating at low temperatures.
- 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. (Initial value)
- Vibration resistance: No malfunction occurred in one sweep between 8.3 and 2000Hz. Test was performed in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states. (Initial value)
4 port direct operated poppet solenoid valve 10-VQD1000

Dimensions

L plug connector: 10-VQD1121 L-M5
M plug connector: 10-VQD1121 M-M5

L plug connector: 10-VQD1151 L-M5
M plug connector: 10-VQD1151 M-M5

Lead wire length 300 mm
Indicator light

Direct manual override

M plug connector (M)

L plug connector (L)
Manifold specifications

How to Order

10 - V V 4 Q D 1 5 -

Manifold type
2 — Body ported
5 — Base mounted

Valve stations
02 — 2 stations
... 20 — 20 stations (Maximum)

Port size
M5 — M5 x 0.8
C4 — ø4 cassette
Note) 1(P), 3(R) ports: Rc1/8.

How to Order Valves

10 - V Q D 1 1 5 1 - 5 L - M5

Clean series

Body type
3 — Body ported
5 — Base mounted

Valve option
Nil — Standard (2 W)
V — Vacuum (2 W)
U — For large flow (3.2 W)
W — For large flow, Vacuum (3.2 W)
Note) Energy saving type

Rated voltage
5 — 24 VDC
6 — 12 VDC

Electrical entry
L: Plug lead type
L plug connector, With lead wire
With light/surge voltage suppresser

LO: Plug lead type
L plug connector, Without connector
With light/surge voltage suppresser

M: Plug lead type
M plug connector, With lead wire
With light/surge voltage suppresser

MO: Plug lead type
M plug connector, Without connector
With light/surge voltage suppresser

Port size (Body ported only)
M5 — M5 thread
4 port direct operated poppet solenoid valve 10-VQD1000

Dimensions

Plug lead unit manifold: 10-VV4QD12-

M plug connector (M)

L plug connector (L)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>n: Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</td>
</tr>
<tr>
<td>L1</td>
<td>28 39 50 61 72 83 94 105 116 127 138 149 160 171 182 193 204 215 226 237</td>
</tr>
<tr>
<td>L2</td>
<td>20 31 42 53 64 75 86 97 108 119 130 141 152 163 174 185 196 207 218 229</td>
</tr>
</tbody>
</table>
Dimensions

Plug lead unit manifold: 10-VV4QD15-□□

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>n: Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>39 50 61 72 83 94 105 116 127 138 149 160 171 182 193 204 215 226 237</td>
</tr>
<tr>
<td>L2</td>
<td>31 42 53 64 75 86 97 108 119 130 141 152 163 174 185 196 207 218 229</td>
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