Series VQ4000
Base Mounted
Plug-in/Plug Lead Single Unit

Model

<table>
<thead>
<tr>
<th>Series</th>
<th>Configuration</th>
<th>Model</th>
<th>Flow characteristics</th>
<th>Response time (ms)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ4000</td>
<td>3 position double check</td>
<td>Metal seal VQ46S0</td>
<td>C [dm³/min] b 2.7 6.2 6.0 C [dm³/min] b 5.9 1.9</td>
<td>55 or less 57 or less</td>
<td>0.50 (0.56)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rubber seal VQ46S1</td>
<td>1.8 1.8 1.8 1.8</td>
<td>57 or less 57 or less</td>
<td>0.50 (0.56)</td>
</tr>
</tbody>
</table>

Note 1) Value for valve on sub-plate and cylinder port Rc 3/8
Note 2) Based on JIS B 8375-1981 Supply pressure: 0.5 MPa, with indicator light and surge voltage suppressor, clean air. This will change depending on pressure and air quality. The value when ON for the double type.

Standard Specifications

Valve construction
- Metal seal
- Rubber seal

Fluid
- Air/Inert gas

Maximum operating pressure
- Single: 0.15 MPa (0.7 MPa)
- Double: 0.15 MPa (0.7 MPa)

Ambient and fluid temperature
- 

Lubrication
- Not required

Manual override
- Push type/Locking type (Tool required) Option

Shock/Vibration resistance
- 150/30 m/s²

Enclosure
- Dust tight (IP65 compatible)

Coil rated voltage
- 12, 24 VDC, 100, 110, 200, 220 VAC (50/60 Hz)

Allowable voltage fluctuation
- ±10% of rated voltage

Coil insulation type
- Class B or equivalent

Power consumption (Current)
- 0.1 W DC (42 mA), 0.5 W DC (21 mA)
- 1 W DC (83 mA), 0.5 W DC (42 mA)
- 1.2 VA (12 mA), 1.2 VA (12 mA)
- 1.3 VA (11.7 mA), 1.3 VA (11.7 mA)
- 2.4 VA (12 mA), 2.4 VA (12 mA)
- 2.6 VA (11.7 mA), 2.6 VA (11.7 mA)

Note 1) Use dry air to prevent condensation when operating at low temperatures.

Note 2) 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.

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.

Note 3) Values inside ( ) denote the low wattage (0.5 W) specifications.
How to Order Valves

**Type of actuation**
- 1: 2 position single
- 2: 2 position double
- 3: 3 position closed center
- 4: 3 position exhaust center
- 5: 3 position pressure center
- 6: 3 position double check

**Porting specifications**
- Nil: Side ported
- B: Bottom ported

**Enclosure**
- Nil: Dust-protected
- W: Dusttight/Low jetproof type (IP65)

**Port size**
- Nil: Without sub-plate (For manifold)
- 02: Rc 1/4
- 03: Rc 3/8

**Note**
- For thread standard, refer to page 2-5-39.

**Body**
- 0: Plug-in sub-plate
- 1: Plug-in
- 2: Plug lead

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

**Electrical entry**
- G: Lead wire length 0.6 m
- H: Lead wire length 1.5 m

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

**Function**
- Y: Standard type (1 W)
- V: Low wattage type (0.5 W)
- R: External pilot

**Light/Surge voltage suppressor**
- Nil: Yes
- E: Without light, with surge voltage suppressor

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

**How to Order Sub-plates**

**Series VQ4000**

**Plug-in/Plug Lead: Single Unit**

**Port size**
- 02: Rc 1/4
- 03: Rc 3/8

**Porting specifications**
- Nil: Side ported
- B: Bottom ported

**Electrical entry**
- Plug-in conduit terminal
- Plug lead

**Enclosure**
- Nil: Dust-protected
- W: Dusttight/Low jetproof type (IP65)

**Note**
- For bottom ported port size is RC 1/4 only.
- For thread standard, refer to page 2-5-39.

Replacement of pilot valve assembly (Voltage)
- Refer to pages 2-5-44 and 2-5-45 for pilot valve assembly part numbers.
- For “How to Replace”, refer to page 2-5-3.

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

**Body**
- 5: Plug lead sub-plate

**Port size**
- 02: Rc 1/4
- 03: Rc 3/8

**Note**
- For thread standard, refer to page 2-5-39.
Series VQ4000

Plug-in Type

Conduit terminal

2 position single: VQ410

3 position closed center: VQ430

3 position exhaust center: VQ440

3 position pressure center: VQ450

2 position double: VQ420

3 position double check: VQ460

3 position double check: VQ460
### Series VQ4000

**Base Mounted Plug-in Unit**

#### How to Order Manifold

**VV5Q 4 1 08 C8 F U1 K**

- **Series**: VQ4000
- **Manifold**: Plug-in unit
- **Stations**: 01 1 station
- **Cylinder port**:
  - C8: With One-touch fitting for ø8
  - C10: With One-touch fitting for ø10
  - C12: With One-touch fitting for ø12
  - G2: Rc 1/4
  - G3: Rc 3/8
  - B: Bottom ported Rc 1/4
  - CM: Mixed
- **Control unit**
  - Kit type: Refer to pages 2-5-40 to 2-5-43.
  - Option: None
  - Exhaust cleaner: For D side mounting
  - Exhaust cleaner: For U side mounting
  - Special wiring specifications (Except double wiring)
  - Name plate (T kit only)
  - Direct exhaust with silencer box: Exhaust from both sides (F/L kits only)
  - Direct exhaust with silencer box: D side exhaust
  - Direct exhaust with silencer box: U side exhaust
  - Enclosure IP65 (Except F kit)

### Kit/Electrical entry/Cable length

- **F** kit (D-sub connector)
  - Connector entry direction:
    - D side
      - Kit D0
        - U0: Without cable
        - U1: Cable length 1.5 m
        - 1 to 18 stations
      - Kit D1
        - U1: Cable length 1.5 m
        - D2: U2: Cable length 3 m
        - 1 to 18 stations
      - Kit D3
        - U3: Cable length 5 m
        - D2: U2: Cable length 3 m
        - D3: U3: Cable length 5 m
    - U side
    - Kit F
      - D0: U0: Without cable
      - D1: U1: Cable length 1.5 m
      - D2: U2: Cable length 3 m
      - D3: U3: Cable length 5 m

- **L** kit (Lead wire cable)
  - Electrical entry:
    - IP65 compatible
    - D side
      - Kit K:
        - D0: U0: Cable length 0.6 m
        - 1 to 16 stations
      - D1: U1: Cable length 1.5 m
      - D2: U2: Cable length 3 m
      - 1 to 16 stations
      - Kit K:
      - L:
        - D0: U0: Cable length 0.6 m
        - 1 to 16 stations
        - D1: U1: Cable length 1.5 m
        - D2: U2: Cable length 3 m

- **T** kit (Terminal block box kit)
  - Connector entry direction:
    - D side
      - Kit D0
        - U0: Without cable
      - Kit D1
        - U1: Cable length 1.5 m
        - 1 to 18 stations
      - Kit D2
        - U2: Cable length 3 m
      - 1 to 18 stations
      - Kit D3
        - U3: Cable length 5 m
      - 1 to 18 stations
    - U side
    - Kit F
      - U0: Cable length 1.5 m
      - D2: U2: Cable length 3 m
      - D3: U3: Cable length 5 m
      - 1 to 18 stations

### S kit (Serial transmission unit)

- The valve is equipped with a lamp/surge suppressor, and the voltage is 24 VDC.
- IP65 compatible

**Note** Shown VV5Q41-05C12FD0

Simple specials are available with SMC Simple Special System. For details about applicable models, please contact SMC.
Manifold Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Base model</th>
<th>Type of connection</th>
<th>Porting specifications</th>
<th>Maximum applicable stations</th>
<th>Applicable solenoid valve</th>
<th>5 station weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ4000</td>
<td>VQ541-□□□□</td>
<td>F kit–D-sub connector</td>
<td>Rc 1/2 Option C8 (For ø8)</td>
<td>F, T kit 12 stations</td>
<td>VQ4□00</td>
<td>2.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T kit–Terminal block box</td>
<td>C10 (For ø10)</td>
<td>L kit 16 stations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>L kit–Lead wire</td>
<td>C12 (For ø12)</td>
<td>S kit 10 stations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S kit–Serial transmission</td>
<td>Rc 1/4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flow Characteristics at the Number of Manifold Stations (Operated individually)

<table>
<thead>
<tr>
<th>Model</th>
<th>Passage/Stations</th>
<th>Station 1</th>
<th>Station 5</th>
<th>Station 10</th>
<th>Station 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ4□00</td>
<td>1 → 4/2 (P → A/B)</td>
<td>5.9</td>
<td>0.23</td>
<td>1.5</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>4/2 → 5/3 (A/B → EA/EB)</td>
<td>0.19</td>
<td>6.8</td>
<td>0.31</td>
<td>7.0</td>
</tr>
<tr>
<td>VQ4□01</td>
<td>1 → 4/2 (P → A/B)</td>
<td>5.9</td>
<td>0.23</td>
<td>1.5</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>4/2 → 5/3 (A/B → EA/EB)</td>
<td>0.19</td>
<td>6.8</td>
<td>0.31</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Manifold Option

Blanking plate assembly VVQ4000-10A-1

Individual SUP spacer VVQ4000-P-1-□□□□

Individual EXH spacer VVQ4000-R-1-□□□□

Throttle valve spacer VVQ4000-20A-1

SUP stop valve spacer VVQ4000-37A-1

SUP/EXH block plate VVQ4000-16A

Interface regulator ARBQ4000-□□□□-P-1

Release valve spacer VVQ4000-24A-1D

Double check spacer with residual pressure exhaust VVQ4000-25A-1

Direct exhaust with silencer box [-S □□□□]

For exhaust cleaner mounting (-C □□□□)

Note) For details about inch-size One-touch fittings and other thread standards, refer to page 2-5-39.

Note) Port size: Rc 3/8

• Refer to pages 2-5-34 to 2-5-38 for detailed dimensions of each option. For replacement parts, refer to page 2-5-47.

• Refer to pages 2-5-40 to 2-5-43 for control unit.

Note 1) Release valve spacer, built-in silencer (direct exhaust), exhaust cleaner mounting and double check spacer for residual pressure exhaust cannot be combined with external pilot.

Note 2) Can be mounted on L kit only. For other kits, order E type control unit.

(Refer to pages 2-5-40 to 2-5-43.)
**Kit (D-sub connector kit)**

- Simplification and labor savings for wiring work can be achieved by using a D-sub connector for the electrical connection.
- Using connector for flat ribbon cable (25P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Connector entry can be selected on either the U side or the D side according to the mounting orientation.
- Maximum stations are 18.

### D-Sub Connector Kit (25 pins)

**AXT100-DS25-030 050**

( D-sub connector cable assemblies can be ordered by with manifolds. Refer to How to Order Manifold. )

#### Terminal no.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

#### Lead wire color

- Black
- Brown
- Red
- Orange
- Yellow
- Pink
- Blue
- Purple
- Gray
- White

#### Connector manufacturers’ example

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

### How to Order Manifold

**VV5Q 4 F U 1**

- **Series**
  - 4 VQ4000
- **Manifold**
  - 1 Plug-in unit
- **Stations**
  - 01 1 station
  - 02 2 station
  - 03 3 station
  - 04 4 station
  - 05 5 station
  - 09 9 station
  - 10 10 station
  - 11 11 station
  - 12 12 station
  - 13 13 station
  - 14 14 station
  - 15 15 station
  - 16 16 station
  - 17 17 station
  - 18 18 station
- **Cylinder port**
  - C8 With One-touch fitting for ø8
  - C10 With One-touch fitting for ø10
  - C12 With One-touch fitting for ø12
  - 02 Rc 1/4
  - 03 Rc 3/8
  - B Bottom ported Rc 1/4
- **Connector entry direction**
  - D D side entry
  - U U side entry

### D-sub Connector Cable Assembly Terminal No.

- **Terminal no.**
  - 1 Black
  - 2 Brown
  - 3 Red
  - 4 Orange
  - 5 Yellow
  - 6 Pink
  - 7 Blue
  - 8 Purple
  - 9 Gray
  - 10 White
  - 11 Red
  - 12 Yellow
  - 13 Orange
  - 14 Yellow
  - 15 Pink
  - 16 Blue
  - 17 Purple
  - 18 Gray
  - 19 Orange
  - 20 Red
  - 21 White
  - 22 Pink
  - 23 Red
  - 24 Black
  - 25 White

### Electric Characteristics

- **Item**
  - Conductor resistance
  - Voltage limit
  - Insulation resistance

- **Characteristics**
  - $\Omega$ km, 20°C
  - VAC, 1 min.
  - MΩ km, 20°C

- **Conductor resistance**
  - 65 or less

- **Voltage limit**
  - 1000

- **Insulation resistance**
  - 5 or less

- **Note** The minimum bending radius for D-sub connector cables is 20 mm.

### Cable (Length)

- 0 Without cable
- 1 Cable length 1.5 m
- 2 Cable length 3 m
- 3 Cable length 5 m

### Option

- **Symbol**
  - Nil
  - CD
  - CU
  - K
  - SB
  - SD

- **Option**
  - None
  - Exhaust cleaner: For D side mounting
  - Exhaust cleaner: For U side mounting
  - Special wiring specifications (Except double wiring)
  - Direct exhaust with silencer box: Exhaust from both sides
  - Direct exhaust with silencer box: D side exhaust

- **Note 1)** When two or more symbols are specified, indicate them alphabetically. Example) -CDK

- **Note 2)** Combination of [C ½] and [S 3/8] is not possible.

- **Note 3)** Specify the wiring specifications on the manifold specification sheet.

- **Note 4)** Refer to pages 2-5-40 to 2-5-43 for with control unit.

**Manifold Specifications**

<table>
<thead>
<tr>
<th>Series</th>
<th>Porting specifications</th>
<th>Port size</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ4000</td>
<td>Side Rc 1/2</td>
<td>C 8, 10, 12</td>
<td>Max. 18 stations</td>
</tr>
<tr>
<td></td>
<td>Bottom Rc 1/4, 3/8</td>
<td>Rc 1/4</td>
<td></td>
</tr>
</tbody>
</table>

**Series VQ4000**

- **Port location**
  - 1[1], 5[1], 3[1], 7[1]
  - 4[1], 2[1], 6[1]

**Base Mounted**

**Note 1)**

**Note 2)**

**Note 3)**

**Note 4)**

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

Example) -CDK

Combination of [C ½] and [S 3/8] is not possible.

Specify the wiring specifications on the manifold specification sheet.

Refer to pages 2-5-40 to 2-5-43 for with control unit.
**Electrical wiring specifications**

**How to Order Valves**

<table>
<thead>
<tr>
<th>VQ 4</th>
<th>1</th>
<th>0</th>
<th>0</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of actuation</td>
<td>2 position single</td>
<td>2 position double</td>
<td>3 position closed center</td>
<td>3 position pressure center</td>
</tr>
</tbody>
</table>

**Seal**

| 0 | Metal seal |
| 1 | Rubber seal |

**Function**

<table>
<thead>
<tr>
<th>Nil</th>
<th>Standard type (1 W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y¹¹</td>
<td>Low wattage type (0.5 W)</td>
</tr>
<tr>
<td>R⁰⁰</td>
<td>External pilot</td>
</tr>
</tbody>
</table>

**Manual override**

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

**Light/ Surge voltage suppressor**

- Nil: Without light, with surge voltage suppressor
- E: Yes

**Coil voltage**

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

**Note**

- Note 1: Applicable to DC specifications.
- Note 2: Refer to page 2-5-39 for external pilot specification. Combination of external pilot and perfect interface is not possible.
- Note 3: When two or more symbols are specified, indicate them alphabetically.

**Special Wiring Specifications**

Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types. Mixed single and double wiring is available as an option.

**1. How to order**

Indicate option symbol "-K" in the manifold part number and be sure to specify station positions for single or double wiring on the manifold specification sheet.

**How to Order Manifold Assembly**

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

**Example**

VQ4041-2, 50FD2-1 set — Manifold base part no. VQ4040-5 — Valve part no. (Stations 1 and 2)
VQ4040-5 — Valve part no. (Stations 3 and 4)
VQ4030-5 — Valve part no. (Station 5)

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

Enter in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate in the manifold specification sheet.
Kit (D-sub connector kit)

Applicable connector: D-sub connector (25P)
(Conforming to MIL-C-24308)

Connector location on D side (FD)

Connector location on U side (FU)

Manual override

Indicator light

Stations

2-5-12
formula L1 = 25n + 63, L2 = 25n + 76  
n: Station (Maximum standard 18 stations)
Kit (Terminal block box kit)

**Enclosure IP65 compliant**

**This type has a small terminal block inside a junction box.**

The provision of a G 3/4 electrical entry allows connection of conduit fittings.

- Maximum stations are 18.
- 2 stations are used for terminal box mounting.

**Terminal Block Specifications**

- **Series:** VQ4000
- **Porting specifications:** 4(A), 2(B)
- **Port location:** 4(A), 2(B)
- **Port size:** 1(P), 5(R1), 3(R2)
- **Side:** Bottom

<table>
<thead>
<tr>
<th>Series</th>
<th>Porting specifications</th>
<th>Port size</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ4000</td>
<td>Side Rc 1/2 C 8, 10, 12</td>
<td>Rc 1/4, 3/8</td>
<td>Max. 18 stations</td>
</tr>
<tr>
<td></td>
<td>Bottom Rc 1/4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Applicable terminal:** 1.25-3S, 1.25Y-3, 1.25Y-3N, 1.25Y-3.5

**Manifold Specifications**

**Step 1. How to remove terminal block cover**

Loosen the 4 mounting screws (M4) and open the terminal block cover.

**Step 2. How to attach the terminal block cover**

Securely tighten the screws with the torque shown in the table below, after confirming that the gasket is installed correctly.

| Proper tightening torque (N·m) | 0.7 to 1.2 |

**Step 3. How to attach the terminal block cover**

- Add 2 stations for terminal block box mounting.

**How to Order Manifold**

**Series VQ4000**

- **Stations:**
  - 03: 3 stations
  - 18: 18 stations

- **Cylinder port**
  - C8: With One-touch fitting for ø8
  - C10: With One-touch fitting for ø10
  - C12: With One-touch fitting for ø12
  - 02: Rc 1/4
  - 03: Rc 3/8
  - B: Bottom ported Rc 1/4
  - CM: Mixed

- **Symbol**
  - VV5Q: Kit (Terminal block box kit)

- **Option**
  - Nil
  - CD: Exhaust cleaner: For D side mounting
  - CU: Exhaust cleaner: For U side mounting
  - K: Special wiring specifications (Except double wiring)
  - N: Name plate
  - SD: Direct exhaust with silencer box: D side exhaust
  - SU: Direct exhaust with silencer box: U side exhaust
  - W: IP65 enclosure

**Note:**
- As an option, the maximum number of stations can be increased by special wiring specifications. For details, refer to page 2-5-15.
- Note 1) When two or more symbols are specified, indicate them alphabetically. Example: CDK
- Note 2) Combination of [CD] and [SD] is not possible.
- Note 3) Specify the wiring specifications on the manifold specification sheet.
- Note 4) Name plate is inlaid in the terminal block cover.
- Note 5) Refer to pages 2-5-40 to 2-5-43 for with control unit.
Special Wiring Specifications

Double wiring (connected to SOL. A and SOL. B) is used for the internal wiring of each station, regardless of valve and option types. The optional specification permits mixture of single and double wiring. However, the maximum number of stations is 16.

1. How to Order
   Indicate option symbol “-K” in the manifold part number and be sure to specify station positions for single or double wiring on the manifold specification sheet.

2. Wiring specifications
   Connections begin with the A side solenoid of the first station being connected to terminal no. 1, and continue in the order indicated by the arrow in the drawing without skipping any terminals.

How to Order Manifold Assembly

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

<Example>
Terminal block box kit
W5Q41-07C8T0-1 set —Manifold base part no.
VQ4100-5 — Valve part no. (Stations 1 and 2)
VQ4200-5 — Valve part no. (Stations 3 and 4)
VQ4300-5—1 set — Valve part no. (Station 5)

Enter in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate in the manifold specification sheet.

How to Order Valves

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

<Example>
Terminal block box kit
VV5Q41-07C8T0····1 set
VQ4100-5············2 sets
VQ4200-5············2 sets
VQ4300-5··············1 set

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

How to Order

Indicate option symbol “-K” in the manifold part number and be sure to specify station positions for single or double wiring on the manifold specification sheet.

Standard wiring

Wiring with control unit

Terminal no. | Terminal no. | Polarity | Positive | Negative
---|---|---|---|---
1 station | SOL A 1A | Release valve | (+) | (-)
2 stations | SOL B 1B | Pressure switch | (-) | (+)
3 stations | SOL A 2A | SOL A 2B | (-) | (+)
4 stations | SOL B 3A | SOL B 3B | (-) | (+)
5 stations | SOL A 4A | SOL A 4B | (-) | (+)
6 stations | SOL B 5A | SOL B 5B | (-) | (+)
7 stations | SOL A 6A | SOL A 6B | (-) | (+)
8 stations | SOL B 7A | SOL B 7B | (-) | (+)
9 stations | SOL A 8A | SOL A 8B | (-) | (+)
10 stations | SOL B 9A | SOL B 9B | (-) | (+)

Note) There is no polarity. It can also be used as a negative common.

Function

<table>
<thead>
<tr>
<th>Seal</th>
<th>Standard type (1 W)</th>
<th>Low wattage type (0.5 W)</th>
<th>External pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Metal seal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Rubber seal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1) Applicable to DC specifications.
Note 2) Refer to page 2-5-39 for external pilot specification. Combination of external pilot and perfect interface is not possible.
Note 3) When two or more symbols are specified, indicate them alphabetically.
Kit (Terminal block box kit)

- 2n-Rc 1/4, 3/8, C8, C10, C12 4(A), 2(B) port
- Rc 1/4: Rc 1/4 thread
- Rc 3/8: Rc 3/8 thread
- C8: One-touch fitting for ø8
- C10: One-touch fitting for ø10
- C12: One-touch fitting for ø12

Note) Shown VV5Q41-08C12TO-W
Bottom ported drawing

2-G 3/4
(Conduit port)

2-Rc 1/8
(External pilot port)

Dimensions

<table>
<thead>
<tr>
<th>L</th>
<th>n</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>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td></td>
<td>138</td>
<td>163</td>
<td>188</td>
<td>213</td>
<td>238</td>
<td>263</td>
<td>288</td>
<td>313</td>
<td>338</td>
<td>363</td>
<td>388</td>
<td>413</td>
<td>438</td>
<td>463</td>
<td>488</td>
<td>513</td>
</tr>
<tr>
<td>L2</td>
<td></td>
<td>151</td>
<td>176</td>
<td>201</td>
<td>226</td>
<td>251</td>
<td>276</td>
<td>301</td>
<td>326</td>
<td>351</td>
<td>376</td>
<td>401</td>
<td>426</td>
<td>451</td>
<td>476</td>
<td>501</td>
<td>526</td>
</tr>
</tbody>
</table>

Formula L1 = 25n + 63, L2 = 25n + 76

n: Station (Maximum standard 18 stations)

* Including 2 stations for terminal box.
Manifold Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Porting specifications</th>
<th>Port size</th>
<th>Applicable stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ4000</td>
<td>4(A), 2(B) port location</td>
<td>1(P); 3(R1, R2)</td>
<td>4(A), 2(B)</td>
</tr>
<tr>
<td>Side</td>
<td>Rc 1/2</td>
<td>C 8, 10, 12</td>
<td>Max. 16 stations</td>
</tr>
<tr>
<td>Bottom</td>
<td>Rc 1/4, 3/8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wiring Specifications

Three lead wires are attached to each station regardless of the type of valve which is mounted. The red wire is for COM connection.

Lead Wire Assembly with Connector

<table>
<thead>
<tr>
<th>Lead wire length</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6 m</td>
<td>VVQ4000-44A-8-L50132</td>
</tr>
<tr>
<td>1.5 m</td>
<td>VVQ4000-44A-15-L50132</td>
</tr>
<tr>
<td>3 m</td>
<td>VVQ4000-44A-30-L50132</td>
</tr>
</tbody>
</table>

How to Order Manifold

VV5Q 4 1 08 C8 L U

|| Series | 4 VQ4000 |
|--------|---------|
| Manifold | Plug-in unit |
| Stations | 01 1 station |
|         | 16 16 stations |
| 02       | Rc 1/4 |
| 03       | Rc 3/8 |
| B        | Bottom ported Rc 1/4 |
| CM       | Mixed |

Option

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>nil</td>
<td>None</td>
</tr>
<tr>
<td>CD</td>
<td>Exhaust cleaner: For D side mounting</td>
</tr>
<tr>
<td>CU</td>
<td>Exhaust cleaner: For U side mounting</td>
</tr>
<tr>
<td>SB</td>
<td>Direct exhaust with silencer box: Exhaust from both sides</td>
</tr>
<tr>
<td>SD</td>
<td>Direct exhaust with silencer box: D side exhaust</td>
</tr>
<tr>
<td>SU</td>
<td>Direct exhaust with silencer box: U side exhaust</td>
</tr>
<tr>
<td>W</td>
<td>IP65 enclosure</td>
</tr>
</tbody>
</table>

Note: When two or more symbols are specified, indicate them alphabetically. Example) -CDW
How to Order Valves

**VQ 4**

<table>
<thead>
<tr>
<th>Series</th>
<th>VQ4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of actuation</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2 position single</td>
</tr>
<tr>
<td>2</td>
<td>2 position double</td>
</tr>
<tr>
<td>3</td>
<td>3 position closed center</td>
</tr>
<tr>
<td>4</td>
<td>3 position exhaust center</td>
</tr>
<tr>
<td>5</td>
<td>3 position pressure center</td>
</tr>
<tr>
<td>6</td>
<td>3 position double check</td>
</tr>
</tbody>
</table>

**Seal**

| 0 | Metal seal |
| 1 | Rubber seal |

**Enclosure**

- Nil: Dust tight
- W: Dust tight/Low jetproof type (IP65)

**Manual override**

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

**Light/Surge voltage suppressor**

- Nil: Without light, with surge voltage suppressor
- Y: Yes

**Function**

- Nil: Standard type (1 W)
- Y: Low wattage type (0.5 W)
- R: External pilot

**Coil voltage**

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

*Note 1) Applicable to DC specification.*
*Note 2) Refer to page 2-5-39 for external pilot specification. Combination of external pilot and perfect interface is not possible.*
*Note 3) When two or more symbols are specified, indicate them alphabetically.*

---

How to Order Manifold Assembly

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

**<Example>**

Lead wire kit with cable (3 m)

- VV5Q41-05C8LD2---1 set — Manifold base part no.
- *VQ4100-5···············2 sets — Valve part no. (Stations 1 and 2)*
- *VQ4200-5···············2 sets — Valve part no. (Stations 3 and 4)*
- *VQ4300-5··············1 set — Valve part no. (Station 5)*

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

Enter in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate in the manifold specification sheet.

---

SMC

2-5-19
Bottom ported drawing

Dimensions

<table>
<thead>
<tr>
<th>Station</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>88</td>
<td>101</td>
</tr>
<tr>
<td>2</td>
<td>113</td>
<td>126</td>
</tr>
<tr>
<td>3</td>
<td>138</td>
<td>151</td>
</tr>
<tr>
<td>4</td>
<td>163</td>
<td>176</td>
</tr>
<tr>
<td>5</td>
<td>186</td>
<td>201</td>
</tr>
<tr>
<td>6</td>
<td>213</td>
<td>226</td>
</tr>
<tr>
<td>7</td>
<td>238</td>
<td>251</td>
</tr>
<tr>
<td>8</td>
<td>263</td>
<td>276</td>
</tr>
<tr>
<td>9</td>
<td>286</td>
<td>301</td>
</tr>
<tr>
<td>10</td>
<td>313</td>
<td>326</td>
</tr>
<tr>
<td>11</td>
<td>338</td>
<td>351</td>
</tr>
<tr>
<td>12</td>
<td>363</td>
<td>376</td>
</tr>
<tr>
<td>13</td>
<td>388</td>
<td>401</td>
</tr>
<tr>
<td>14</td>
<td>413</td>
<td>426</td>
</tr>
<tr>
<td>15</td>
<td>438</td>
<td>451</td>
</tr>
<tr>
<td>16</td>
<td>463</td>
<td>476</td>
</tr>
</tbody>
</table>

Formula: L1 = 25n + 63, L2 = 25n + 76

n: Station (Maximum 16 stations)
The system comes in a type SA (generic for small scale systems) for equipment with a small number of I/O points, or 32 points max., type SB (applicable to Mitsubishi Electric models) for controlling 512 I/O points max., type SC (applicable to OMRON models), type SD (applicable to SHARP models), type SQ (applicable to OMRON Electric models) for controlling 512 I/O points max., type SJ (applicable to SUNX models), type SK (applicable to Fuji Electric models) for controlling 512 I/O points max., type SC (applicable to OMRON Electric models) for controlling 512 I/O points max., and type SF (applicable to NKE Uni-wire System; 128 points max.).

Maximum stations are 18. 2 stations are used for serial unit mounting.

Stations are counted from station 1 on the D side. Double wiring (connected to SOL, A and SOL B) is adopted for the internal wiring of each station, regardless of valve and option types.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>External power supply</td>
<td>24 VDC +10%, -5%</td>
</tr>
<tr>
<td>Current consumption</td>
<td>SA, SB, SBB, SD, SF, SH, SJ, SK, SQ, SR, SV, 0.1A SC, 0.3A</td>
</tr>
</tbody>
</table>

Stations:
- Add 2 stations for serial unit mounting.

Cylinder ports:
- With One-touch fitting for ø8
- With One-touch fitting for ø10
- With One-touch fitting for ø12
- Bottom ported Rc 1/4

The serial transmission system reduces wiring work, while minimizing wiring and saving space.

Current consumption

* For details on specifications and handling, refer to the separate technical instruction manual.
Correspondence of SI unit output numbers and solenoid valve coils

Mixed wiring is available as an option. Use the manifold specification sheet to specify.

<Example>

Serial transmission unit
VV5Q41-07C8SA ····1 set
* VQ4100-5·············2 sets
* VQ4200-5·············2 sets
* VQ4300-5···············1 set

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

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

How to Order Valves

VQ 4 1 0 0 5

- Enclosure
  - Nil Dusttight
  - W Dustlight/Low jetproof type (IP65)

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

- Coil voltage
  - 5 24 VDC

Function
  - Nil Standard type (1 W)
  - Y Low wattage type (0.5 W)
  - R External pilot

Note 1) Applicable to DC specifications.
Note 2) For external pilot specifications, refer to page 2-5-39.
Combination of the external pilot and perfect interface is not possible.
Note 3) When two or more symbols are specified, indicate them alphabetically.

How to Order Manifold Assembly

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

<Example>

Serial transmission unit
V5Q41-37C8SA ····1 set —Manifold base part no.
* VQ4100-5·············2 sets —Valve part no. (Stations 1 and 2)
* VQ4200-5·············2 sets —Valve part no. (Stations 3 and 4)
* VQ4300-5···············1 set —Valve part no. (Station 5)

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

Enter in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate in the manifold specification sheet.
**Base Mounted**

**Series VQ4000**

**S Kit (Serial transmission unit)**

![Diagram of the VQ4000 kit with stations, ports, and dimensions]

- **Formula:** \( L_1 = 25n + 63, \ L_2 = 25n + 76 \)
- **Note:** In the case of EX124 for SI unit, conduit port (G 1/2) will be 4 locations.

### Dimensions

<table>
<thead>
<tr>
<th></th>
<th>0</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>
</tr>
</thead>
<tbody>
<tr>
<td>( L_1 )</td>
<td>138</td>
<td>163</td>
<td>188</td>
<td>213</td>
<td>238</td>
<td>263</td>
<td>288</td>
<td>313</td>
<td>338</td>
<td>363</td>
<td>388</td>
<td>413</td>
<td>438</td>
<td>463</td>
<td>488</td>
<td>513</td>
<td></td>
</tr>
<tr>
<td>( L_2 )</td>
<td>151</td>
<td>176</td>
<td>201</td>
<td>226</td>
<td>251</td>
<td>276</td>
<td>301</td>
<td>326</td>
<td>351</td>
<td>376</td>
<td>401</td>
<td>426</td>
<td>451</td>
<td>476</td>
<td>501</td>
<td>526</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Shown VV5Q41-08C12SQ-W
Formula \( L1 = 25n + 63, \ L2 = 25n + 76 \)

Stations

<table>
<thead>
<tr>
<th>( n )</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>
</tr>
</thead>
<tbody>
<tr>
<td>( L1 )</td>
<td>138</td>
<td>163</td>
<td>188</td>
<td>213</td>
<td>238</td>
<td>263</td>
<td>288</td>
<td>313</td>
<td>338</td>
<td>363</td>
<td>388</td>
<td>413</td>
<td>438</td>
<td>463</td>
<td>488</td>
<td>513</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( L2 )</td>
<td>151</td>
<td>176</td>
<td>201</td>
<td>226</td>
<td>251</td>
<td>276</td>
<td>301</td>
<td>326</td>
<td>351</td>
<td>376</td>
<td>401</td>
<td>426</td>
<td>451</td>
<td>476</td>
<td>501</td>
<td>526</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Applicable network:** DeviceNet/PROFIBUS-DP

- The serial transmission system reduces wiring work, while minimizing wiring and saving-space.

**SI unit for DeviceNet/PROFIBUS**

- As a slave for DeviceNet/PROFIBUS, it is possible to control ON/OFF of a solenoid valve with the maximum of 32 points. Furthermore, by connecting a discrete input block, it is possible to input the sensor signal for 32 points at the maximum.

**Input block**

- Meaning of an expansion block, connecting with SI unit, for sensor-inputting for auto switches, etc. Sensor-input is available up to 8 per one input block. By the NPN/PNP switch, it is able to adjust COM to sensor.

**Details in Connector**

- **Communication connector (PROFIBUS-DP):**
  - Cable side connector example: Made by Siemens AG 6ES5 760-2CB11

<table>
<thead>
<tr>
<th>Pin no.</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M5V</td>
<td>GND Terminal</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Signal-N</td>
</tr>
<tr>
<td>4</td>
<td>B</td>
<td>Signal-P</td>
</tr>
<tr>
<td>6</td>
<td>+5V</td>
<td>Terminal + 5V</td>
</tr>
<tr>
<td>9</td>
<td>SIELD</td>
<td>Shield ground</td>
</tr>
<tr>
<td>12</td>
<td>RTS</td>
<td>Optical fiber (Reserve)</td>
</tr>
</tbody>
</table>

- Pin no. 5, 7, 8, 10, and 11 marked with ● are open.

- Connector's shape and pin assignment is interchangeable with ET200C made by Siemens AG.

**How to Order Manifold**

1. **Series:** VV5Q 4 1 08 C8 S D QW 1 W
2. **Manifold:** Plug-in unit
3. **Stations:** 01 1 station, 16 16 stations
4. **Cylinder ports:**
   - Symbol: C8, C10, C12
   - Port size: Rc 1/4, Rc 3/8, Bottom ported Rc 1/4

**Kit**

- **Serial transmission kit**

**Mounting SI unit**

- **SI unit COM**

- **Input unit COM**

- **Input unit**
  - Nil: With no SI unit, or input unit (In the case of SDOW)
  - N: NPN (-)
  - +COM: DeviceNet (SDQW)
  - −COM: Profibus DP (SDNWN)

**Note:** Only +COM is available for DeviceNet. Order a mounting valve with +COM. Since PROFIBUS is −COM only, order −COM for valves to be mounted.
Details in Connector

- Input connector: M12 5 pins (XS2F compatible made by OMRON Corp.) x 8 pcs.
  Cable side connector example: XS2G made by OMRON Corp.

- Power source connector: Series 723 (made by Franz Binder GmbH & Co. KG)
  5 pins (72309-0115-80-05)
  Cable side connector example: Franz Binder GmbH & Co. KG 72309-0114-70-15, etc.
  ∗ DIN type 5 pins

Caution

When an enclosure equivalent to IP65 is required, place a waterproof cover on the unused input connector. For waterproof cover, order it separately.
Example: OMRON Corp. XS2Z-12

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SW+</td>
<td>Sensor power supply +</td>
</tr>
<tr>
<td>2</td>
<td>N.C.</td>
<td>Open ∗</td>
</tr>
<tr>
<td>3</td>
<td>SW–</td>
<td>Sensor power supply –</td>
</tr>
<tr>
<td>4</td>
<td>SIGNAL</td>
<td>Sensor input signal</td>
</tr>
<tr>
<td>5</td>
<td>PE</td>
<td>Protective sensor ground</td>
</tr>
</tbody>
</table>

Connector input no.: 0, 2, 4, 6
Input no.: 1, 3, 5, 7

| SW+  | 1 |
| SW–  | 3 |
| SIGNAL–n | 4 |
| PE   | 5 |

Communication connector (DeviceNet): M12 5 pins (for DeviceNet compliant)
Example of corresponding cable assemblies with connector:
OMRON Corporation: DCA1-5CN06F1
Karl Lumberg GmbH & Co. KG: RKT5-56

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Drain</td>
<td>Drain/Shield</td>
</tr>
<tr>
<td>2</td>
<td>V+</td>
<td>Circuit power supply +</td>
</tr>
<tr>
<td>3</td>
<td>V–</td>
<td>Circuit power supply –</td>
</tr>
<tr>
<td>4</td>
<td>CAN_H</td>
<td>Signal H</td>
</tr>
<tr>
<td>5</td>
<td>CAN_L</td>
<td>Signal L</td>
</tr>
</tbody>
</table>

Item conforming to Micro style connector in DeviceNet specifications.

How to Order Valves

VQ 4 1 0 0 5

- Type of actuation
  1  2 position single
  2  2 position double
  3  3 position closed center
  4  3 position exhaust center
  5  3 position pressure center
  6  3 position double check

- Seal
  0  Metal seal
  1  Rubber seal

- Enclosure
  W  Dusttight
  Low jetproof type (IP65)

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

- Coil voltage
  5  24 VDC

Function

- Nil  Standard type (1 W)
- Y  Low wattage type (0.5 W)
- R  External pilot

Note 1) Applicable to DC specifications.
Note 2) For external pilot specifications, refer to page 2-5-39.
Combination of the external pilot and perfect interface is not possible.
Note 3) When two or more symbols are specified, indicate them alphabetically.

How to Order Manifold Assembly

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

<Example>
Serial transmission unit
VQ4001-05D300W1-W−1 set —Manifold base part no.
VQ4100-5W−2 sets —Valve no. (Stations 1 and 2)
VQ4200-5W−2 sets —Valve no. (Stations 3 and 4)
VQ4300-5W−1 set —Valve part no. (Station 5)
Prefix the asterisk to the part nos. of the solenoid valve, etc.

Enter in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate in the manifold specification sheet.
### Indicator Unit (LED) Descriptions and Functions

#### SI Unit (DeviceNet)

<table>
<thead>
<tr>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR(V)</td>
<td>ON when solenoid valve power supply is turned ON</td>
</tr>
<tr>
<td>PWR</td>
<td>ON when DeviceNet circuit power supply input is turned ON</td>
</tr>
<tr>
<td>MOD/NET</td>
<td>OFF: Power supply off, off line, or when checking duplication of MAC_ID</td>
</tr>
<tr>
<td></td>
<td>Green blinking: Waiting for connection (On line)</td>
</tr>
<tr>
<td></td>
<td>Green ON: Connection established (On line)</td>
</tr>
<tr>
<td></td>
<td>Red blinking: Connection time out (Minor communication abnormality occurs)</td>
</tr>
<tr>
<td></td>
<td>Red ON: MAC_DI duplication error, or BUSOFF error (Major communication abnormality occurs)</td>
</tr>
</tbody>
</table>

#### SI Unit (PROFIBUS-DP)

<table>
<thead>
<tr>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>ON when solenoid valve power supply is turned ON</td>
</tr>
<tr>
<td>RUN</td>
<td>ON when operating (SI unit power supply is ON)</td>
</tr>
<tr>
<td>DIA</td>
<td>ON when self-diagnosis device detects abnormality</td>
</tr>
<tr>
<td>BF</td>
<td>ON for BUS abnormality</td>
</tr>
</tbody>
</table>

#### Input block

<table>
<thead>
<tr>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>ON when sensor power is turned ON</td>
</tr>
<tr>
<td>RUN</td>
<td>ON when short circuit protection is working</td>
</tr>
<tr>
<td>MOD/NET</td>
<td>0 to 7</td>
</tr>
</tbody>
</table>

### Dimensions

Formula L1 = 25n + 63, L2 = 25n + 198

<table>
<thead>
<tr>
<th>n: Stations</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>113</td>
<td>248</td>
</tr>
<tr>
<td>2</td>
<td>138</td>
<td>273</td>
</tr>
<tr>
<td>3</td>
<td>163</td>
<td>298</td>
</tr>
<tr>
<td>4</td>
<td>188</td>
<td>323</td>
</tr>
<tr>
<td>5</td>
<td>213</td>
<td>348</td>
</tr>
<tr>
<td>6</td>
<td>238</td>
<td>373</td>
</tr>
<tr>
<td>7</td>
<td>263</td>
<td>398</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
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<td></td>
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<tr>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Manual Override

- **ON when solenoid valve power supply is turned ON**
- **OFF when the power supply voltage is less than 19 V**
- **ON when operating (SI unit power supply is ON)**
- **ON when self-diagnosis device detects abnormality**
- **ON for BUS abnormality**

#### Indicator Light

- **(Pilot EXH port)**
  - Rc 1/2
  - 3-Rc 1/2
- **(External pilot port)**
  - 2n-Rc 1/4, 3/8, C8, C10, C12 {4(A), 2(B)}

### Casing

- **SI Unit (DeviceNet)**
  - **/L50237**
  - **SI Unit (PROFIBUS-DP)**
  - **/L50237**

### Input Block

- **Base Mounted**

---

**Note:** The image contains diagrams and tables that are not fully transcribed here. For a complete understanding, please refer to the image.
**Series VQ4000**

**Construction**

### Plug-in Unit

#### Metal seal type

<table>
<thead>
<tr>
<th>Component Parts</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool/Sleeve</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Piston</td>
<td>Resin</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>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool valve</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Piston</td>
<td>Resin</td>
<td></td>
</tr>
</tbody>
</table>

### Replacement Parts

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Part Number</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Pilot valve assembly</td>
<td>VQZ111P-□</td>
<td>+: Coil rated voltage Example) 24 VDC: 5</td>
</tr>
</tbody>
</table>