

3 Port Solenoid Valve Direct Operated Poppet Type Series VT307

Rubber Seal



RoHS

[Option]
Note) CE compliant: Electrical entry is applicable only for the DIN terminal.



How to Order

V T 307 - 5 G 1 - 01 - F -

Body type

| | |
|---|--------------|
| T | Body ported |
| O | For manifold |

Valve option

| | |
|-----|---|
| Nil | Standard type |
| E* | Continuous duty type |
| Y* | Energy-saving type |
| V* | Vacuum specification type |
| W* | Energy-saving type, Vacuum specification type |

* Semi-standard

Pressure specifications

| | |
|-----|----------------------------|
| Nil | Standard type (0.7 MPa) |
| K* | High-pressure type (1 MPa) |

* Semi-standard

Rated 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 |
| 7* | 240 VAC, 50/60 Hz |

* Semi-standard

Electrical entry

| Grommet | DIN terminal |
|--|---|
| <p>G: 300 mm lead wire H: 600 mm lead wire</p> | <p>D: With connector</p> <p>DO: Without connector</p> |

CE-compliant

| | |
|-----|---------------|
| Nil | None |
| Q | CE-compliant* |

* Electrical entry and light/surge voltage suppressor: D/DO/DZ/DOZ only

Bracket

| | |
|-----|--------------|
| Nil | None |
| F | With bracket |

Thread type

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

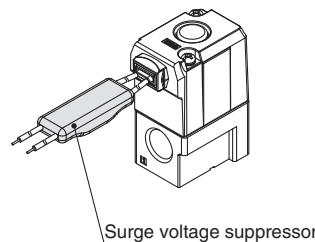
Port size

| | |
|-----|-----------------------------|
| Nil | Without port (For manifold) |
| 01 | 1/8 (6A) |
| 02 | 1/4 (8A) |

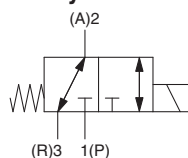
Light/Surge voltage suppressor

| | |
|-----|--|
| Nil | None |
| S | With surge voltage suppressor (Grommet type only) |
| Z | With light/surge voltage suppressor (DIN terminal type only) |

With surge voltage suppressor



JIS Symbol



Manifold

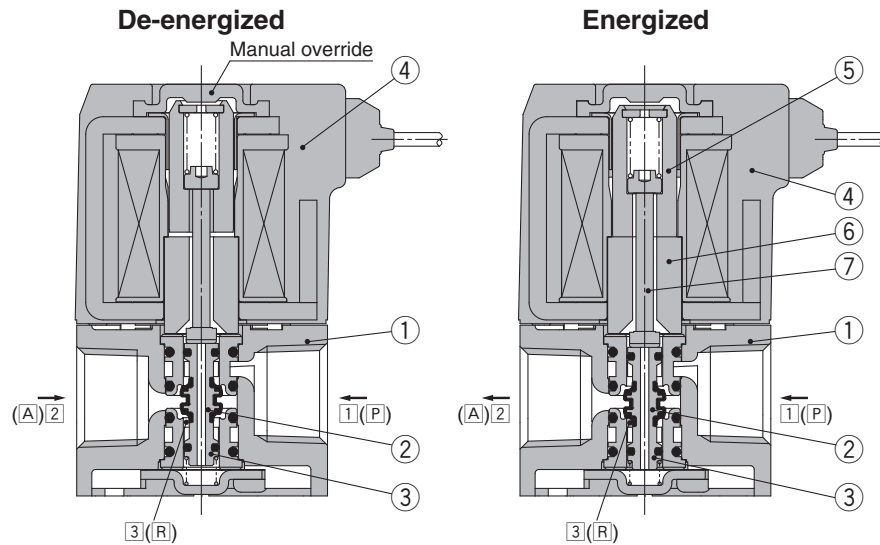
| Model | Applicable manifold type | Accessories |
|------------|------------------------------|---|
| VO307□(-Q) | Common or individual exhaust | Function plate (DXT152-14-1A) ^{Note)} Mounting screw (NXT013-3) |

Note) It is not applicable to the continuous duty type. Refer to the accessories on page 5.

Option

| Description | Part no. |
|-------------|---------------------------|
| Bracket | DXT152-25-1A (With screw) |

Construction



Operation principle

<De-energized>

Poppet valve (2) is pushed upward by the return spring (3), port 1 is closed. Then, port 2 and port 3 are connected.

Air flow direction:

Port 1 ↔ Block, 2 ↔ 3

<Energized>

When energizing the molded coil (4), the armature (5) is magnetically attracted to the core (6), and through the push rod (7), it pushes down the poppet valve (2) and port 3 is closed. Then, port 1 and port 2 are connected. At this time, there will be gaps between the armature (5) and the core (6), but the armature (5) will be magnetically firmly attracted to the core (6).

Air flow direction:

Port 1 ↔ Port 2, Port 3 ↔ Block

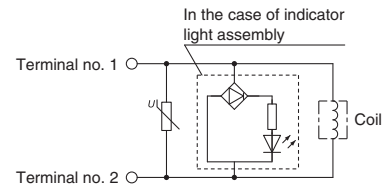
Component Parts

| No. | Description | Material | Note |
|-----|----------------------|---------------------|--------------|
| 1 | Body | Aluminum die-casted | Color: White |
| 2 | Poppet valve | Aluminum, HNBR | |
| 3 | Return spring | Stainless steel | |
| 4 | Molded coil | Resin | |

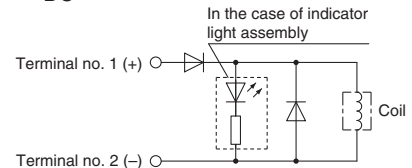
⚠ Caution

Light/Surge Voltage Suppressor

AC



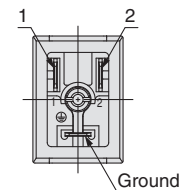
DC



Electrical Connection

DIN terminal is connected inside as in the figure below. Connect to the corresponding power supply.

DIN terminal block



| | | |
|--------------|---|---|
| Terminal no. | 1 | 2 |
| DIN terminal | + | - |

· Applicable cable O.D.
ø6 to ø8

How to Use DIN Terminal

1. Disassembly

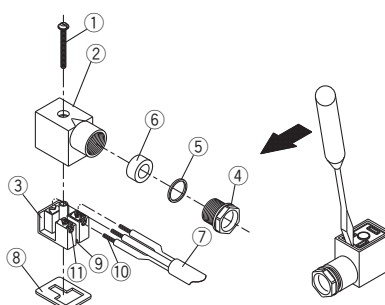
- 1) After loosening the screw (1), then if the housing (2) is pulled in the direction of the screw (1), the connector will be removed from the body of equipment (solenoid, etc.).
- 2) Pull the screw (1) out of the housing (2).
- 3) On the bottom part of the terminal block (3), there's a cut-off part (9). If a small flat head screwdriver is inserted between the opening in the bottom, terminal block (3) will be removed from the housing (2).
- 4) Remove the cable gland (4), plain washer (5) and rubber seal (6).

2. Wiring

- 1) Pass the cable (7) through the cable gland (4), plain washer (5) and rubber seal (6) in this order, and then insert them into the housing (2).
 - 2) Loosen the screw (1) attached to the terminal block (3). Then, pass the lead wire (10) through the terminal block (3) and tighten the screw (1) again.
- Note 1) Tighten within the tightening torque of 0.5 N·m ±15%.
- Note 2) Cable (7) outside diameter: ø6 to ø8 mm
- Note 3) Crimped terminal like round-shape or Y-shape cannot be used.

3. Assembly

- 1) Pass the cable (7) through the cable gland (4), plain washer (5) and rubber seal (6) in this order and connect to the terminal block (3). Then, mount the terminal block (3) on the housing (2). (Push it down until you hear the click sound.)
 - 2) Put the rubber seal (6) and plain washer (5) in this order into the cable entry of the housing (2), and then tighten the cable gland (4) securely.
 - 3) Insert the gasket (8) between the bottom part of terminal block (3) and the plug attached to the equipment. Then, screw in (1) from the top of the housing (2) to tighten it.
- Note 1) Tighten within the tightening torque of 0.5 N·m ±20%.
- Note 2) Connector orientation can be changed 180° depending on how the housing (2) and the terminal block (3) are assembled.



Connector for DIN Terminal

| Description | Part no. |
|---------------|----------------------------|
| DIN connector | B1B09-2A (Standard) |
| | GM209NJ-B17 (CE-compliant) |