NAMUR Interface 5 Port Solenoid Valve

**VFN2000N Series**

The interface surface complies with NAMUR.
- Can be directly installed on the industrial valve actuator that complies with NAMUR.

### How to Order

<table>
<thead>
<tr>
<th>Solenoid</th>
<th>NAMUR Interface</th>
<th>Voltage</th>
<th>Electrical entry</th>
<th>Thread type</th>
<th>CE marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Single solenoid</td>
<td>G</td>
<td>Grommet</td>
<td>Nil</td>
<td>Q</td>
</tr>
<tr>
<td>2</td>
<td>Double solenoid</td>
<td>E</td>
<td>Grommet terminal</td>
<td>F</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>T</td>
<td>Conduit terminal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>D</td>
<td>DIN terminal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>DO</td>
<td>DIN terminal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Y</td>
<td>DIN terminal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>YO</td>
<td>DIN terminal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Conforming to DIN 43650, Form B

### Specifications

- **Valve construction**: Rubber seal
- **Fluid**: Air
- **Max. operating pressure**: 0.9 MPa (130 psi)
- **Min. operating pressure**: 0.15 MPa (22 psi)
- **Ambient and fluid temperature**: –10 to +60°C
- **Lubrication**: Not required
- **Pilot valve manual override**: Non-locking push type (Flush/Extended)/Locking type (Tool required)
- **Enclosure**: Dustproof
- **Port size**: 1/4
- **Cv factor (Effective area)**: Refer to “Flow Rate Characteristics” table below.
- **Weight**: Refer to “Weight” table below.
- **Other**: Cylinder ports should be NAMUR hole pattern.
- **Coil rated voltage**: 12, 24 VDC, 100, 110 to 120, 200, 220, 240 VAC (50/60 Hz)
- **Allowable voltage fluctuation**: –15 to +10% of rated voltage
- **Coil insulation type**: Class B or equivalent
- **Apparent power AC (Power consumption)**: Inrush 5.0 VA/60 Hz, 5.6 VA/50 Hz
- **Holding 2.3 VA (1.5 W)/60 Hz, 3.4 VA (2.1 W) 9/50 Hz
- **Power consumption DC**: 1.8 W
- **Electrical entry**: Grommet, Grommet terminal, Conduit terminal, DIN terminal

### Flow Rate Characteristics

<table>
<thead>
<tr>
<th>2-position</th>
<th>Single solenoid</th>
<th>Double solenoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1→4/2 (P→A/B)</td>
<td>C</td>
<td>3.48</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>Cv</td>
<td>0.85</td>
</tr>
<tr>
<td>4/2→5/3 (A/B→EA/EB)</td>
<td>C</td>
<td>4.57</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>Cv</td>
<td>1.06</td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VFN2120N-5D-02F</td>
<td>260</td>
</tr>
<tr>
<td>VFN2220N-5D-02F</td>
<td>400</td>
</tr>
</tbody>
</table>

For other rated voltages, please contact SMC.

Note 1) Use dry-air at low temperature.
Note 2) Use turbine oil No.1 (ISO VG32), if lubricated.
**NAMUR Interface 5 Port Solenoid Valve**  
**VFN2000N Series**

**Dimensions**

**DIN terminal**  
**VFN2120N-□□□□□-02□-□**

- Applicable heavy-duty cord  
  O.D. ø6 to ø8
- Pilot EXH
- 3 x Rc, G, NPT1/4  
  <1(P), 5(R1), 2(R2) port>
- Manual override
- 2 x ø5.5 Mounting hole

**DIN terminal**  
**VFN2220N-□□□□□-02□-□**

- Applicable heavy-duty cord  
  O.D. ø6 to ø8
- Pilot EXH
- 3 x Rc, G, NPT1/4  
  <1(P), 5(R1), 2(R2) port>
- Manual override
- 2 x ø5.5 Mounting hole

**Grommet**  
**VFN2120N-□□□□□-02□-□**

- Surge voltage suppressor  
  (With "S")

**Grommet terminal**  
**VFN2120N-□□□□□-02□-□**

- Lead wire O.D. ø3.5 at max.
- Indicator light (With "Z")

**Conduit terminal**  
**VFN2120N-□□□□□-02□-□**

- Indicator light  
  (With "Z")

**Note:**  
- Dimensions are approximate and subject to manufacturing tolerances.
- Specifications such as O.D., mounting holes, and wire sizes are for reference only and may vary depending on the specific model.
**NAMUR Mounting Pattern**

Axis A-A' can be aligned to suit.

M5 thread, depth 8
With or without insert depending on base material.

Coding stud
M5 x 10 DIN913-45H

Drive flange face
G1/4 DIN/ISO228/1

Solenoid valve flange face

Size of O-ring dedicated to this valve: 14.8 x 2.4

The solenoid valve can be attached with 2 mounting bolts.
The positioning of the coding stud hole is left up to the manufacturer and thus also determines the location of the coding stud.

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**How to Order Pilot Valve**

**SF4 - 5DZ -12- X99 -**

- **Coil rated voltage**
  - 1: 100 VAC, 50/60 Hz
  - 2: 200 VAC, 50/60 Hz
  - 3: 110 to 120 VAC, 50/60 Hz
  - 4: 220 VAC, 50/60 Hz
  - 5: 24 VDC
  - 6: 12 VDC
  - 7: 240 VAC, 50/60 Hz

  For other rated voltages, please contact SMC.

- **Electrical entry**
  - G: Grommet
  - E: Grommet terminal
  - T: Conduit terminal
  - D: DIN terminal
  - DO: DIN terminal (Without connector)
  - Y [Note]: DIN terminal (Without connector)

  Note: Conforming to DIN 43650, Form B

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

- **Light/Surge voltage suppressor**
  - Nil: None
  - Z: With light/surge voltage suppressor
  - S [Note]: With surge voltage suppressor

  Note: Available for grommet type only. Grommet type is available only with surge voltage suppressor, not with indicator light.

- **CE-compliant**
  - Nil —
  - Q: CE-compliant

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**Pilot valve assembly for VFN200N/VFN2000N**