3 Port Solenoid Valve

Series VKF300

Direct Operated Poppet Type

- **Compact yet provides a large flow capacity**
  Body width 18 mm

- **Available in vacuum applications**
  (-101.2 kPa)
  (Valve leakage: 0.03 cm³/s He or less)
  Can be used in vacuum/release circuits

- **Universal porting**
  N.C./N.O. type can be switched by supplying air to port 1 (P) or 3 (R). 2 way valves and selector valves can also be freely used.

- **Various manifold piping directions**
  Output port: Manifold set-up allowing 360° rotation of 2 (A) entry direction (in 90° increments)

- **Easy manual operation**
  Since manual overrides are located in 2 directions, on the top and on the side of the valve, manual override operation is possible and is unaffected by mounting space and piping direction, etc.

- **Ozone resistant**
  (Series 80-)
  FKM (Fluoro rubber) is used for the fluid-contact rubber materials, allowing for use even in ozone environments.
3 Port Solenoid Valve
Direct Operated Poppet Type
Series VKF300

How to Order Valves

- **Body ported (Single type)**
- **Body ported (For manifold)**
- **Base mounted**

### Valve Option
- \( V \): For vacuum
- \( Y \): For low power consumption
- \( W \): For vacuum/low power consumption
- \( E \): Continuous duty type

### Light/ Surge Voltage Suppressor
- \( N \): None
- \( S \): With surge voltage suppressor
- \( Z \): With light/surge voltage suppressor (Type “D” only)

### Flow Characteristics/Mass

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Operating pressure range (MPa)</th>
<th>Port size</th>
<th>Flow characteristics</th>
<th>Mass (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VKF335</td>
<td>0 to 0.7</td>
<td>M5 x 0.8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.67 0.10 0.15 0.41 0.39 0.11</td>
<td>80 (^{(1)})</td>
</tr>
<tr>
<td>VKF335-Y</td>
<td>0 to 0.7</td>
<td>M5 x 0.8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.56 0.13 0.13 0.32 0.25 0.09</td>
<td>90 (^{(2)})</td>
</tr>
<tr>
<td>VKF335-Z</td>
<td>0 to 0.7</td>
<td>M5 x 0.8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.56 0.13 0.13 0.32 0.25 0.09</td>
<td>90 (^{(2)})</td>
</tr>
<tr>
<td>VKF335-W</td>
<td>0 to 0.7</td>
<td>M5 x 0.8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.56 0.13 0.13 0.32 0.25 0.09</td>
<td>90 (^{(2)})</td>
</tr>
<tr>
<td>VKF336</td>
<td>0 to 0.7</td>
<td>Rc 1/8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.68 0.13 0.15 0.59 0.31 0.14</td>
<td>120</td>
</tr>
<tr>
<td>VKF336-Y</td>
<td>0 to 0.7</td>
<td>Rc 1/8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.56 0.13 0.13 0.32 0.25 0.09</td>
<td>130</td>
</tr>
<tr>
<td>VKF336-Z</td>
<td>0 to 0.7</td>
<td>Rc 1/8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.56 0.13 0.13 0.32 0.25 0.09</td>
<td>130</td>
</tr>
<tr>
<td>VKF336-W</td>
<td>0 to 0.7</td>
<td>Rc 1/8</td>
<td>( 1 \rightarrow 2 (P \rightarrow A) ) 0.56 0.13 0.13 0.32 0.25 0.09</td>
<td>130</td>
</tr>
</tbody>
</table>

Note 1) VKF335: Add 10 g to each when equipped with bracket.
3 Port Solenoid Valve  
Direct Operated Poppet Type  
**Series VKF300**

### Standard Specifications

<table>
<thead>
<tr>
<th>Type of actuation</th>
<th>Direct operated type 2 position single solenoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>Air</td>
</tr>
<tr>
<td>Ambient and fluid temperature</td>
<td>Max. 50°C</td>
</tr>
<tr>
<td>Response time (at 0.5 MPa)</td>
<td>10 ms or less (Standard), 15 ms or less (Low power consumption type)</td>
</tr>
<tr>
<td>Manual override</td>
<td>Non-locking push type</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required (Use turbine oil Class 1 ISO VG32, if lubricated)</td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Imped/Vibration resistance</td>
<td>300/50 nV</td>
</tr>
<tr>
<td>Enclosure</td>
<td>Dustproof</td>
</tr>
</tbody>
</table>

#### Electrical specifications

<table>
<thead>
<tr>
<th>Electrical entry</th>
<th>Grommet (G), DIN terminal (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>AC 100, 110, 200, 220, 240 V</td>
</tr>
<tr>
<td></td>
<td>DC 6, 12, 24, 48 V</td>
</tr>
<tr>
<td>Allowable voltage fluctuation</td>
<td>±10% of rated voltage</td>
</tr>
<tr>
<td>Apparent power (AC)</td>
<td>Brush, 9.5 VA/50 Hz, 8 VA/60 Hz</td>
</tr>
<tr>
<td></td>
<td>Holding, 7 VA/50 Hz, 5 VA/80 Hz</td>
</tr>
<tr>
<td>Power consumption (DC)</td>
<td>Inductive 4 W (Standard), 2 W (Low power consumption type)</td>
</tr>
<tr>
<td></td>
<td>Capacitive 4.3 W (Standard), 2.3 W (Low power consumption type)</td>
</tr>
<tr>
<td>Surge voltage suppressor</td>
<td>AC Variator</td>
</tr>
<tr>
<td></td>
<td>DC Diode (Varistor for 12 VDC or less)</td>
</tr>
<tr>
<td>Indicator light</td>
<td>AC Neon bulb</td>
</tr>
<tr>
<td></td>
<td>DC LED</td>
</tr>
</tbody>
</table>

**Note 1:** Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, at rated voltage, without surge voltage suppression)

**Note 2:** Impact resistance: No malfunction occurred when it is tested with a drop test 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)

### Construction

![Construction Diagram]

### 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>Solenoid coil assembly</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sub-plate</td>
<td>Aluminum die-cast</td>
<td>For VKF304, VKF300-5-01</td>
</tr>
<tr>
<td>3</td>
<td>Body</td>
<td>Aluminum die-cast</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Spool/Sleeve</td>
<td>Aluminum</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Manual override</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Bracket assembly</td>
<td>Steel</td>
<td>For VKF332, VKF300-13A-2</td>
</tr>
<tr>
<td>8</td>
<td>Gasket assembly</td>
<td>—</td>
<td>For VKF333, VKF300-11A-2</td>
</tr>
<tr>
<td></td>
<td>(With mounting screw)</td>
<td></td>
<td>For VKF334, VKF300-11A-1</td>
</tr>
<tr>
<td>9</td>
<td>Bushing assembly</td>
<td>Resin</td>
<td>For VKF337, VKF300-8A-1</td>
</tr>
</tbody>
</table>

2 sets per unit required
**Series VKF300**

**Dimensions: Single Type**

**Body ported**
Grommet: VKF332 □-□G-□-□

---

**DIN terminal: VKF332 □-□D-□-□**

---

**Base mounted**
Grommet: VKF334 □-□G-□

---

**DIN terminal: VKF334 □-□D-□**

Refer to grommet type for other dimensions.
How to Order Manifold

Body ported

Common SUP/Common EXH

Type 20: Body ported (A port top mounted)
2(A) port: Rc 1/8, M5 x 0.8

Valve stations

Option

Applicable solenoid valve
VFK333-□□□□-M5
VFK333-□□□□-01

Applicable blanking plate assembly
VK300-42-1A
Bracket
VK300-43-1A

Common SUP/Individual EXH

Type 21: Body ported (A port top mounted)
2(A) port: Rc 1/8, M6 x 0.8

Valve stations

Option

Applicable solenoid valve
VFK333-□□□□-M5
VFK333-□□□□-01

Applicable blanking plate assembly
VK300-42-1A
Bracket
VK300-43-1A

Base mounted

Common SUP/Common EXH

Type 40: Base mounted (A port bottom mounted)
1(P) port: Rc 1/8
3(R) port: Rc 1/8

Valve stations

Option

Applicable solenoid valve
VFK334-□□□□

Applicable blanking plate assembly
VK300-42-1A
Bracket
VK300-43-1A

Type 42: Base mounted (A port side mounted)
2(A) port: Rc 1/8

Valve stations

Option

Applicable solenoid valve
VFK334-□□□□

Applicable blanking plate assembly
VK300-42-1A

Type S42 (Solenoid on same side as port A)
1(P) port: Rc 1/8
3(R) port: Rc 1/8

Valve stations

Option

Solenoid direction

Thread type

Port size

Option

Applicable solenoid valve
VFK334-□□□□

Applicable blanking plate assembly
VK300-42-1A

Series VKF300

1573
### Series VKF300

#### Dimensions: Manifold

**Body ported**

**Type 20 Manifold** Common SUP, Common EXH/Top Ported

<table>
<thead>
<tr>
<th>L Dimension</th>
<th>n: Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>35  54  73  92  111  130  149  168  187  206  225  244  263  282  301  320  339  358  377  396</td>
</tr>
<tr>
<td>L2</td>
<td>27  46  65  84  103  122  141  160  179  198  217  236  255  274  293  312  331  350  369  388</td>
</tr>
<tr>
<td>L3</td>
<td>13  32  51  70  89  108  127  146  165  184  203  222  241  260  279  298  317  336  355  374</td>
</tr>
</tbody>
</table>

**DIN terminal:** D

Applicable cable O.D. ø4 to ø6.5

**Series VKF300**

**Type 21 Manifold** Common SUP, Individual EXH/Top Ported

<table>
<thead>
<tr>
<th>L Dimension</th>
<th>n: Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>38  57  76  95  114  133  152  171  190  209  228  247  266  285  304  323  342  361  380  399</td>
</tr>
<tr>
<td>L2</td>
<td>27  46  65  84  103  122  141  160  179  198  217  236  255  274  293  312  331  350  369  388</td>
</tr>
</tbody>
</table>

**DIN terminal:** D

Applicable cable O.D. ø4 to ø6.5
3 Port Solenoid Valve
Direct Operated Poppet Type Series VKF300

Base mounted
Type 40 Manifold Common SUP, Common EXH/Bottom Ported

Grommet: G
Manual override (Non-locking)
4 x M3 x 0.5, depth 6 (Bracket mounting screw)

DIN terminal: D
Applicable cable O.D. ø4 to ø6.5
Indicator light (Type DZ only)

L Dimension

<table>
<thead>
<tr>
<th></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>37</td>
<td>56</td>
<td>75</td>
<td>94</td>
<td>113</td>
<td>132</td>
<td>151</td>
<td>170</td>
<td>189</td>
<td>208</td>
<td>227</td>
<td>246</td>
<td>265</td>
<td>284</td>
<td>303</td>
<td>322</td>
<td>341</td>
<td>360</td>
<td>379</td>
<td>398</td>
</tr>
<tr>
<td>L2</td>
<td>27</td>
<td>46</td>
<td>65</td>
<td>84</td>
<td>103</td>
<td>122</td>
<td>141</td>
<td>160</td>
<td>179</td>
<td>198</td>
<td>217</td>
<td>236</td>
<td>255</td>
<td>274</td>
<td>293</td>
<td>312</td>
<td>331</td>
<td>350</td>
<td>369</td>
<td>388</td>
</tr>
<tr>
<td>L3</td>
<td>13</td>
<td>32</td>
<td>51</td>
<td>70</td>
<td>89</td>
<td>108</td>
<td>127</td>
<td>146</td>
<td>165</td>
<td>184</td>
<td>203</td>
<td>222</td>
<td>241</td>
<td>260</td>
<td>279</td>
<td>298</td>
<td>317</td>
<td>336</td>
<td>355</td>
<td>374</td>
</tr>
</tbody>
</table>

n: Stations

SMC
Series VKF300

Dimensions: Manifold

Base mounted

Type 42 Manifold  Common SUP, Common EXH/Side Ported

Type S42 Manifold  Common SUP, Common EXH/Side Ported: Same direction as solenoid

<table>
<thead>
<tr>
<th>L Dimension</th>
<th>n: Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>L2</td>
</tr>
<tr>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>57</td>
<td>47</td>
</tr>
<tr>
<td>76</td>
<td>66</td>
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<tr>
<td>95</td>
<td>85</td>
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<tr>
<td>114</td>
<td>104</td>
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<tr>
<td>133</td>
<td>123</td>
</tr>
<tr>
<td>152</td>
<td>142</td>
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<tr>
<td>171</td>
<td>161</td>
</tr>
<tr>
<td>190</td>
<td>180</td>
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<tr>
<td>209</td>
<td>199</td>
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<tr>
<td>228</td>
<td>218</td>
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<td>247</td>
<td>237</td>
</tr>
<tr>
<td>266</td>
<td>256</td>
</tr>
<tr>
<td>285</td>
<td>275</td>
</tr>
<tr>
<td>304</td>
<td>294</td>
</tr>
<tr>
<td>323</td>
<td>313</td>
</tr>
<tr>
<td>342</td>
<td>332</td>
</tr>
<tr>
<td>361</td>
<td>351</td>
</tr>
<tr>
<td>380</td>
<td>370</td>
</tr>
<tr>
<td>399</td>
<td>389</td>
</tr>
</tbody>
</table>

Grommet: G

DIN terminal: D

Applicable cable O.D. ø4 to ø6.5
Series VKF300
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.

- Non-locking push type (Tool required)

There are manual overrides in 2 directions, on the top and on the side (solenoid side). By pressing either of the manual overrides in the direction of the arrow (R) until it stops (approx. 1 mm), it will turn ON, and it turns OFF when released.

Mounting of Valves

⚠️ Caution

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) | 0.6 to 0.8 |

Light/Surge Voltage Suppressor

⚠️ Caution

Precautions on connection of 24 V or more DC

For the grommet type, connect the positive (+) side to the red lead wire and connect the negative (-) side to the black lead wire. For the DIN terminal, connect the positive (+) side to the connector’s no.1 terminal and connect the negative (-) side to the no.2 terminal. (See the markings on the terminal block.)

- For 12 V or less DC, positive (+) and negative (-) can be connected in either direction.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grommet type (G)</strong></td>
<td><strong>DIN terminal type (D)</strong></td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>No.1 &amp; No.2</td>
<td>No.1 &amp; No.2</td>
</tr>
<tr>
<td>No.1 &amp; Neon bulb &amp; No.2</td>
<td>No.1 &amp; LED &amp; No.2</td>
</tr>
<tr>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>With indicator light</td>
<td>With indicator light</td>
</tr>
<tr>
<td>(+) Red &amp; (-) Black</td>
<td>(+) LED &amp; (-) Black</td>
</tr>
<tr>
<td>12 VDC or less</td>
<td>24 VDC or more</td>
</tr>
</tbody>
</table>

Precautions on connection of 24 V or more DC

- For the grommet type, connect the positive (+) side to the red lead wire and connect the negative (-) side to the black lead wire. For the DIN terminal, connect the positive (+) side to the connector’s no.1 terminal and connect the negative (-) side to the no.2 terminal. (See the markings on the terminal block.)

- For 12 V or less DC, positive (+) and negative (-) can be connected in either direction.

**Grommet type**

- Red (+)
- Black (-)

**DIN terminal type**

- Indicator light (Built in the connector)
- Surge voltage suppressor (Built in the terminal block)
- For AC and 12 V or less DC
- For 24 V or more DC

The bushing may be damaged if the tightening torque of 0.8 N·m is exceeded. In the event that damage does occur, be sure to replace the bushing.

**Sup Block bushing assembly No.**

VKF300-6A-1

- 2 sets per unit are required.
Series VKF300
Specific Product Precautions 2

How to Wire DIN Terminal

⚠️ Warning

• Connection
1. Loosen the set screw and pull out the connector from the terminal block of the solenoid.
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 up, separating the terminal block and the housing.
3. Loosen the terminal screws (slotted screws) on the terminal block, insert the core of the lead wire into the terminal in accordance with the prescribed connection method, and attach securely with the terminal screws.
4. Tighten the ground nut to secure the wire.

• Change of electrical entry (Orientation)
After separating terminal block and housing, the cord entry direction can be changed by attaching the housing in the desired direction (4 directions in 90 increments).

• Precautions
The connector should be inserted and pulled out in a straight line without tilting diagonally.

• Applicable cable
O.D.: ø4 to ø6.5
(Reference)
0.5 mm² 2 core and 3 core wires equivalent to JIS C 3306

how to calculate the flow rate

For obtaining the flow rate, refer to front matters 44 to 47.

Connector part no. VK300-82-1
Part no. for connector with indicator light

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>Voltage symbol</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 VAC</td>
<td>A1</td>
<td>VK300-82-2-01</td>
</tr>
<tr>
<td>200 VAC</td>
<td>A2</td>
<td>VK300-82-2-02</td>
</tr>
<tr>
<td>24 VAC</td>
<td>A3</td>
<td>VK300-82-2-07</td>
</tr>
<tr>
<td>6 VDC</td>
<td>LW6</td>
<td>VK300-82-4-51</td>
</tr>
<tr>
<td>12 VDC</td>
<td>LW2</td>
<td>VK300-82-4-06</td>
</tr>
<tr>
<td>24 VDC</td>
<td>LD4</td>
<td>VK300-82-3-05</td>
</tr>
<tr>
<td>48 VDC</td>
<td>LD8</td>
<td>VK300-82-3-53</td>
</tr>
</tbody>
</table>

Circuit with indicator light

AC
Circuit diagram

12 VDC or less
Circuit diagram

24 VDC or more
Circuit diagram

NL: Neon bulb
R: Resistor
LED: Light emitting diode
D: Protective diode
3 Way Direct Acting

**NVKF 300 Series**

Rubber Seal Solenoid Valve

Compact Size / Large Flow Capacity - Cv 0.25
Low Power Option Available
Vacuum Option Available
Base Mounted or Body Ported
Large Flow Capacity - Cv 0.25

Compact Size - width 0.73" × length 2.67"

Low Power Consumption
4WDC (Standard model)
2WDC (Low wattage model)

Vacuum Application Possible

High Speed Response (10ms)

---

**Model**

<table>
<thead>
<tr>
<th>Body Style</th>
<th>Model</th>
<th>Action</th>
<th>Operating pressure range</th>
<th>Port size</th>
<th>Cv factor</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body ported (with bracket)</td>
<td>NVKF332</td>
<td>2 position single solenoid</td>
<td>0<del>100 PSI (0</del>0.7 MPa)</td>
<td></td>
<td>0.2</td>
<td>0.181 lbs (80 gf)</td>
</tr>
<tr>
<td></td>
<td>NVKF332Y (Low wattage: 2WDC)</td>
<td></td>
<td>1 Torr<del>100 PSI (−100 KPa</del>0.7 MPa)</td>
<td>10-32 Nom. (M5)</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NVKF332V (Vacuum)</td>
<td></td>
<td>0<del>100 PSI (0</del>0.7 MPa)</td>
<td></td>
<td>0.2</td>
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</tr>
<tr>
<td></td>
<td>NVKF332W (Low wattage + Vacuum)</td>
<td></td>
<td>1 Torr<del>100 PSI (−100 KPa</del>0.7 MPa)</td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body ported (for manifold)</td>
<td>NVKF333</td>
<td></td>
<td>0<del>100 PSI (0</del>0.7 MPa)</td>
<td>1/8 NPTF</td>
<td>0.25</td>
<td>0.271 lbs (120 gf)</td>
</tr>
<tr>
<td></td>
<td>NVKF333Y (Low wattage: 2WDC)</td>
<td></td>
<td>1 Torr<del>100 PSI (−100 KPa</del>0.7 MPa)</td>
<td>0.15</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>NVKF333V (Vacuum)</td>
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<td></td>
<td></td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NVKF333W (Low wattage + Vacuum)</td>
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<tr>
<td>Base mounted</td>
<td>NVKF334</td>
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<td></td>
<td>0.25</td>
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<td>NVKF334Y (Low wattage: 2WDC)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>NVKF334V (Vacuum)</td>
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<td></td>
<td></td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NVKF334W (Low wattage + Vacuum)</td>
<td></td>
<td></td>
<td></td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

---

**Specifications**

- **Model**: Direct operated 2 position single solenoid
- **Structure**: Poppet valve
- **Fluid**: Air or inert gas
- **Operating pressure range**: 0~100 PSI (0~0.7 MPa)
- **Ambient and fluid temperature**: Max. 120°F (50°C)
- **Response time**: 10ms or less (Std.)
  Y, W types: 15ms
- **Max. operating frequency**: 600 rpm
- **Manual override**: Non-locking push type
- **Lubrication**: Not required
- **Mounting position**: Free
- **Impact / vibration resistance**: 30G / 5G (83~2000Hz)
- **Protection structure**: Dust proof

---

**Solenoid Specifications**

- **Electrical entry**
  - **AC**: 110V 50Hz, 220V 50Hz, 100V 50Hz, 200V 50Hz
  - **DC**: 12V, 24V
- **Allowance voltage range**: ±10% rated voltage
- **Coil insulation**: Class B or equivalent
- **Temperature rise**: 130°F or less (Standard)
  95°F or less (Low power consumption)
- **Apparent power**
  - **AC**: Standard: 8VA / 60Hz, 9.5VA / 50Hz
    Continuous: 5VA / 60Hz, 7VA / 50Hz
  - **DC**: Without light: 4W (Standard), 2W (Low power consumption, Y, W types)
    With light: 4.3W (Standard), 2.3W (Low power consumption, Y, W types)
- **Surge voltage suppressor**
  - **AC**: Resistor
  - **DC**: Diode
- **Indicator light**
  - **AC**: Neon lamp
  - **DC**: LED

---

*At rated voltage and without light surge voltage suppressor.

* When applied at rated voltage.
* Contact SMC for availability.
**Electrical entry**

- Grommet
  - Lead wire length: 12inch (300mm)
- DIN connector

*Grommet type with 24 inch leads is also available. Special order only.*

**Port size**

- M5 10-32 Nom. (M5)
- 01T 1/8 NPTF (A port only)

**Part no. of option**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket</td>
<td>VFKF300-13A-1</td>
<td>With screw</td>
</tr>
<tr>
<td>Manifold gasket</td>
<td>VFKF300-11A-2</td>
<td>Body ported With screw</td>
</tr>
<tr>
<td></td>
<td>VFKF300-11A-1</td>
<td>Base mounted With screw</td>
</tr>
</tbody>
</table>

**Body ported**

- NVKF332 5G M5 (With bracket)

**Body ported**

- NVKF333 5G M5 (Manifold only)

**Base mounted**

- NVKF334 5G 01T

**Valve option**

- (Standard)
- V Vacuum
- Y Low power consumption
- W Vacuum: Low power consumption

* Special order

**Construction / Parts List**

<table>
<thead>
<tr>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Main 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</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spool valve ass'y</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sleeve ass'y</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>End plate</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Manual guide</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Manual override ass'y</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>Coil ass'y</td>
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<td></td>
</tr>
</tbody>
</table>
Series NVKF300 Manifold

Specifications

<table>
<thead>
<tr>
<th>Valve stations</th>
<th>2~20 stations (max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manifold</td>
<td>Common SUP. Common EXH. Body ported. Base mounted</td>
</tr>
<tr>
<td></td>
<td>Common SUP. Individual EXH. Body ported</td>
</tr>
</tbody>
</table>

How to Order Manifold

Common Supply, Common Exhaust

Body ported / Type 20
(A port: top porting)

**NVV3KF3-20-05-00T**

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

- Optional accessory
  - None
  - F: With bracket (Not mounted)

- Applicable valves
  - NVKF333O-0000-M5
  - NVKF333O-0000-01T

- Applicable blank plate ass'y
  - VK300-42-1A Bracket
  - VK300-43-1A

Base mounted / Type 40
(A port: bottom porting)

**NVV3KF3-40-05-01T**

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

- Optional accessory
  - None
  - F: With bracket (Not mounted)

- Port size
  - **01T**: 1/8 NPTF

- Applicable valves
  - NVKF334O-0000

- Applicable blank plate ass'y
  - VK300-42-1A Bracket
  - VK300-43-1A

Base mounted / Type 42
(A port: side porting)

**NVV3KF3-42-05-01T**

- Position of solenoid
  - Opposite side of A port
  - Same side as A port

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

- Port size
  - **01T**: 1/8 NPTF
  - **B3T**: One touch fitting for 5/8 tube
  - **B7T**: One touch fitting for 1/4 tube

- Applicable valves
  - NVKF334O-0000

- Applicable blank plate ass'y
  - VK300-42-1A

Base mounted / Type S42
(Position of solenoid same as A port side.)

Common Supply, Individual Exhaust

Body ported / Type 21
(A port: top porting)

**NVV3KF3-21-05-00T**

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

- Applicable valves
  - NVKF333O-0000-M5
  - NVKF333O-0000-01T

- Applicable blank plate ass'y
  - VK300-42-1A
3ody Ported
3rommet (G): NVKF332-"G-M5

inch (mm)

=11.81 (300) (Lead wire length)

2-10-32 Nom.(MS)

=11.81 (300) (Lead wire length)

Base Mounted
3rommet (G): NVKF334-"G-01T

inch (mm)
Body Ported (Top Ported) / Type 20 Manifold
NVV3KF3-20-Stations-00T

<table>
<thead>
<tr>
<th>L: Dimensions</th>
<th>n: Stations</th>
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<tbody>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>(54)</td>
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<tr>
<td>L2</td>
<td>1.06</td>
</tr>
</tbody>
</table>

Body Ported (Top Ported) / Type 21 Manifold
NVV3KF3-21-Stations-00T

<table>
<thead>
<tr>
<th>L: Dimensions</th>
<th>n: Stations</th>
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<td>(36)</td>
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</table>
3-base Mounted (Bottom Ported) / Type 40 Manifold

JVV3KF3-40-Stations-01T

Dimensions

Series NVKF 300

inch (mm)

L: Dimensions

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<thead>
<tr>
<th>n</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>11</th>
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<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
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<tbody>
<tr>
<td>L1</td>
<td>1.46</td>
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<td>2.95</td>
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<td>4.45</td>
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<td>5.94</td>
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<td>8.94</td>
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<tr>
<td></td>
<td>(37)</td>
<td>(56)</td>
<td>(75)</td>
<td>(77)</td>
<td>(113)</td>
<td>(132)</td>
<td>(151)</td>
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<td>(246)</td>
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<td>(360)</td>
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<tr>
<td>L2</td>
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<td>1.81</td>
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<td>4.8</td>
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<td>12.28</td>
<td>13.03</td>
<td>13.78</td>
<td>14.53</td>
<td>15.28</td>
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</tbody>
</table>
Base Mounted (Side Ported) / Type 42 Manifold
NVV3KF3-42-Stations-01T

| L | n | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   | (38) | (57) | (76) | (95) | (114) | (133) | (152) | (171) | (190) | (209) | (228) | (247) | (266) | (285) | (304) | (323) | (342) | (361) | (380) | (399) |
| L2 | 1.1 | 1.85 | 2.6 | 3.35 | 4.09 | 4.84 | 5.59 | 6.34 | 7.09 | 7.83 | 8.58 | 9.33 | 10.08 | 10.83 | 11.57 | 12.32 | 13.07 | 13.82 | 14.57 | 15.31 |

Base Mounted (Side Ported) / Type S42 Manifold
NVV3KF3-S42-Stations-01T

| L | n | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   | (38) | (57) | (76) | (95) | (114) | (133) | (152) | (171) | (190) | (209) | (228) | (247) | (266) | (285) | (304) | (323) | (342) | (361) | (380) | (399) |
| L2 | 1.1 | 1.85 | 2.6 | 3.35 | 4.09 | 4.84 | 5.59 | 6.34 | 7.09 | 7.83 | 8.58 | 9.33 | 10.08 | 10.83 | 11.57 | 12.32 | 13.07 | 13.82 | 14.57 | 15.31 |

Dimensions
inch (mm)
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