Modular Connection Type

Residual Pressure Relief
3 Port Solenoid Valve

For connecting to F.R.L. units

<table>
<thead>
<tr>
<th>AC25-A</th>
<th>AC30-A</th>
<th>AC40-A</th>
</tr>
</thead>
</table>

VP500

VP700

Allows for space saving and reduced piping labor.

Power consumption: 0.35 W (Without light)

Example of F.R.L. unit connections

VP500
AC30C-A + VP500

Residual pressure relief 3 port solenoid valve (VP500)

VP700
AW40-A + VP700

Residual pressure relief 3 port solenoid valve (VP700)

Simple Specials System
This system enables us to respond to your special needs (additional machining, accessory assembly, or the designing of a modular unit) and deliver your personalized products as quickly as standard products. Please contact your local sales representative for more details.

VP500/700 Series
VP500/700 Series

How to Order

Modular connection type

VP 5 1 7 Y - 5 D 1 -

Series
5 VP500
7 VP700

Pressure specification
Nil Standard (0.7 MPa)
K High-pressure type (1.0 MPa)

Flow direction
Nil Left to right
R Right to left

Bracket
Nil Without bracket
B With bracket

Manual override
Nil Non-locking
A Non-locking push type (Manual)
E Push-turn locking type (Manual)

Light/surge voltage suppressor
Nil Without light/surge voltage suppressor
S With surge voltage suppressor
Z With light/surge voltage suppressor

Rated voltage
DC
24 VDC
100 VAC
200 VAC
110 VAC [115 VAC]
220 VAC [230 VAC]

AC (50/60 Hz)
1 100 VAC
2 200 VAC
3 110 VAC [115 VAC]
4 220 VAC [230 VAC]

Electrical entry

DIN terminal
DIN (EN175301-803(C)) terminal

D: With connector
DO: Without connector
Y: With connector
YO: Without connector

Symbol

2(A) 2
(P) 1 3(R)

Assembly Example

Products do not come assembled. They should be ordered separately and assembled by the customer.

The Simple Specials System deals with product unification. Please contact your local sales representative for more details.

Assembly example

1 Residual pressure relief 3 port solenoid valve VP517Y-5DZ1
2 Air combination AC30C-03DG
3 Spacer with bracket Y300T-A
4 Spacer Y300-A
5 Piping adapter E300-03-A

Applicable Combinations/Attachment Part Nos.

<table>
<thead>
<tr>
<th>Residual pressure relief 3 port solenoid valve</th>
<th>Air combination</th>
<th>Spacer</th>
<th>Spacer with bracket</th>
<th>Piping adapter</th>
<th>Silencer</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP517</td>
<td>AC25-A</td>
<td>Y300-A</td>
<td>Y300T-A</td>
<td>E300-03-A</td>
<td>AN30-03 AN302-03</td>
</tr>
<tr>
<td>VP717</td>
<td>AC40-C-A</td>
<td>Y400-A</td>
<td>Y400T-A</td>
<td>E400-04-A</td>
<td>AN40-04 AN402-04</td>
</tr>
</tbody>
</table>

*1 Connection threads are not available for the residual pressure relief 3 port solenoid valve. Order a piping adapter separately.
*2 Refer to page 3 for details of the spacer and piping adapter.

* Refer to page 3 for details of the spacer.
## Specifications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of actuation</td>
<td>N.C.</td>
</tr>
<tr>
<td>Internal pilot</td>
<td>Standard</td>
</tr>
<tr>
<td>Operating pressure range [MPa]</td>
<td>High-pressure type 0.2 to 1</td>
</tr>
<tr>
<td>Ambient and fluid temperature [°C]</td>
<td>−10 to 50 (No freezing)</td>
</tr>
<tr>
<td>Maximum operating frequency [Hz]</td>
<td>5</td>
</tr>
<tr>
<td>Manual override (Manual operation)</td>
<td>Non-locking push type</td>
</tr>
<tr>
<td>Pilot exhaust method</td>
<td>Individual exhaust</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required</td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Impact/Vibration resistance [m/s²]</td>
<td>150/30</td>
</tr>
<tr>
<td>Enclosure</td>
<td>IP65</td>
</tr>
</tbody>
</table>

### Fluid

**Air**

### Type of actuation

**N.C.**

### Internal pilot

**Standard**

### Operating pressure range [MPa]

- **High-pressure type**: 0.2 to 1

### Ambient and fluid temperature [°C]

**−10 to 50 (No freezing)**

### Maximum operating frequency [Hz]

**5**

### Manual override (Manual operation)

- Non-locking push type
- Push-turn locking type (Manual)
- Non-locking push type (Manual)

### Pilot exhaust method

- Individual exhaust

### Lubrication

- Not required

### Mounting orientation

- Unrestricted

### Impact/Vibration resistance [m/s²]

- 150/30

### Enclosure

- IP65

---

**1** Impact resistance: No malfunction occurred when it was tested in the axial direction and at right angles to the main valve and armature in both energized and de-energized states. Each condition was tested once. (Default settings)

**Vibration resistance:** No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed in both energized and de-energized states in the axial direction and at right angles to the main valve and armature. (Default settings)

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## Solenoid Specifications

### Electrical entry

<table>
<thead>
<tr>
<th>Coi1 rated voltage [V]</th>
<th>DC</th>
<th>AC (50/60 Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24, 12</td>
<td>100, 110, 200, 220</td>
</tr>
</tbody>
</table>

### Allowable voltage fluctuation

±10% of rated voltage

### Power consumption [W]

<table>
<thead>
<tr>
<th>DC</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.35 (With light: 0.45)</td>
</tr>
<tr>
<td></td>
<td>0.78 (With light: 0.87)</td>
</tr>
<tr>
<td></td>
<td>0.86 (With light: 0.97)</td>
</tr>
<tr>
<td></td>
<td>1.15 (With light: 1.30)</td>
</tr>
<tr>
<td></td>
<td>1.27 (With light: 1.46)</td>
</tr>
<tr>
<td></td>
<td>1.39 (With light: 1.60)</td>
</tr>
</tbody>
</table>

### Apparent power [VA]*1

<table>
<thead>
<tr>
<th>AC</th>
<th>100 V</th>
<th>110 V [115 V]</th>
<th>200 V</th>
<th>220 V [230 V]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.14</td>
<td>0.94 (With light: 1.07)</td>
<td>1.39 (With light: 1.60)</td>
<td>1.39 (With light: 1.60)</td>
</tr>
</tbody>
</table>

### Surge voltage suppressor

- Varistor (DC)

### Indicator light

- LED (DC), Neon bulb (AC)

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**1** The 110 VAC and 115 VAC are interchangeable. The 220 VAC and 230 VAC are interchangeable as well.

**2** The allowable voltage fluctuation is −15% to +5% of the rated voltage for the 115 VAC or 230 VAC.

## Response Time/Weight

<table>
<thead>
<tr>
<th>Model</th>
<th>Pressure specifications</th>
<th>Response time [ms] (at 0.5 MPa)</th>
<th>Weight [g]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without light/write</td>
<td>With light/write</td>
<td></td>
</tr>
<tr>
<td></td>
<td>voltage suppressor</td>
<td>voltage suppressor</td>
<td>AC</td>
</tr>
<tr>
<td>VP517Y</td>
<td>Standard (0.2 to 0.7 MPa)</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>High-pressure type (0.2 to 1.0 MPa)</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td>VP717Y</td>
<td>Standard (0.2 to 0.7 MPa)</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>High-pressure type (0.2 to 1.0 MPa)</td>
<td>67</td>
<td>76</td>
</tr>
</tbody>
</table>

## Flow Rate Characteristics

<table>
<thead>
<tr>
<th>Model</th>
<th>Port size EXH.</th>
<th>Flow rate characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1→2 (P→A)</td>
<td>C [dm³/(s·bar)]</td>
</tr>
<tr>
<td>VP517Y</td>
<td>G3/8</td>
<td>8.8</td>
</tr>
<tr>
<td>VP717Y</td>
<td>G1/2</td>
<td>13.8</td>
</tr>
</tbody>
</table>
VP500/700 Series

Spacer

A piping adapter allows installation/removal of the component without removing the piping and thus makes maintenance easier.

Piping Adapter: 3/8, 1/2

Separate spacers are required for modular units.

Silencer

Compact resin type

High noise reduction type

Dimensions [mm]

<table>
<thead>
<tr>
<th>Model</th>
<th>Port size</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN30-03</td>
<td>3/8</td>
<td>58.5</td>
<td>20</td>
</tr>
<tr>
<td>AN40-04</td>
<td>1/2</td>
<td>68</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Port size</th>
<th>Dimensions [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN302-03</td>
<td>3/8</td>
<td>84</td>
</tr>
<tr>
<td>AN402-04</td>
<td>1/2</td>
<td>95</td>
</tr>
</tbody>
</table>
Modular Connection Type
Residual Pressure Relief 3 Port Solenoid Valve VP500/700 Series

Dimensions

VP517

Details of manual override part (for manual operation)

Type A

Type E
Details of manual override part
(for manual operation)

Type A

Type E
⚠️ **Safety Instructions** Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.