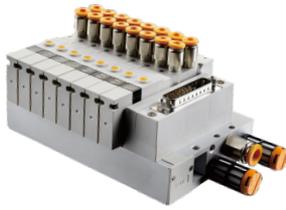


## SV

### Solenoid Valve&Valve Terminal



Integrated valve terminal



Standard valve terminal



Valve slice(top ported)



Valve slice(side/bottom ported)

#### Product Features

- Integrated valve terminal , integrated wiring ;Adopt 25 pins D-sub connector .
- Centralized air inlet and exhaust, available for top ported ,side ported and bottom ported , compact structure.
- Patent design: the pilots of double control valve are on same side; Wiring and piping are on same side.
- 5/2 ways,5/3 ways,5/4 ways(2pcs 3/2 ways ) can be integrated on same valve terminal.
- 0.8W per coil.

#### How to Order?

##### SV Integrated valve terminal

| Series No.                      | Body Size   | Piping Type | Valve quantity for different port   | Voltage   | Pilot Type                                   | Wiring Type   | Manifold Port  | Mounting | Thread Type |
|---------------------------------|---|-------------|---|-----------|--|---|--|----------|-------------|
| S: Standard<br>SN:Energy-saving | V: Top ported<br>VM: Side ported<br>VB: Bottom ported | □ □ □ □     | Qty<br>(Max.24 links for single control<br>Max.12 links for double control) | E4: DC24V | Blank: Internal pilot<br>WB: External pilot① | Blank: Double control wiring (max.12 links)<br>S: Single control wiring (max.24 links)<br>(Note:Mix wiring is available to customize) | Blank: Without accessories<br>D: With DIN rail clip and 1M guide rail<br>D0: With DIN rail clip, no guide rail<br>DIN guide rail packed separately ) |          | Blank: G    |

| Code | Function  | Remark  |
|------|---|---|
| S    | 5/2 single  | assembly sequence, 1st link start from U side |
| D    | 5/2 double  |   |
| C    | 5/3 center closed                                 |   |
| P    | 5/3 center pressure                               |   |
| E    | 5/3 center exhaust                                |   |
| Y ①  | 2pcs 3/2 (N.C.)                                   |   |
| H ①  | 2pcs 3/2 (N.O.)                                   |   |
| U ①  | 2pcs 3/2 (N.O./N.C.)                              |   |
| YK ① | 2pcs 3/2 (N.C.) spring return                     |   |
| HK ① | 2pcs 3/2 (N.O.) spring return                     |   |
| UK ① | 2pcs 3/2 (N.O./N.C.) spring return                |   |
| B    | blind plate                                       |   |
| TA   | port 1 air supply pressure separate               |   |
| TG   | port 3/5 air exhaust pressure separate            |   |
| TL   | port 1/3/5 air supply & exhaust pressure separate |   |
| N    | air supply & exhaust module                       |   |

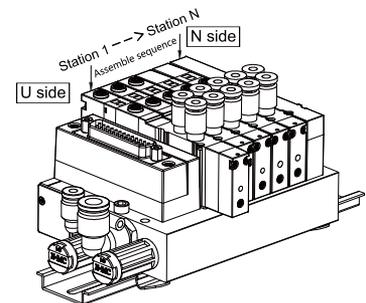
| No.      | Code | Port size                         | Remark  |
|----------|------|-----------------------------------|---|
| 1 Series | M5   | M5: M5 port                       | assembly sequence, 1st link start from U side |
|          | C4   | φ 4 one-touch fitting(ZPOC04-M5C) |   |
|          | M7   | M7: M7 port                       |   |
|          | C6   | φ 6 one-touch fitting(ZPOC06-M7C) |   |
| 2 Series | O6   | 1/8 port                          | assembly sequence, 1st link start from U side |
|          | C4   | φ 4 one-touch fitting(ZPOC04-01G) |   |
|          | C6   | φ 6 one-touch fitting(ZPOC06-01G) |   |
|          | C8   | φ 8 one-touch fitting(ZPOC08-01G) |   |

| Code  | Port entry                                | 1Series | 2Series | Remark  |
|-------|---|---------|---------|---|
| Blank | Both side without silencer, fitting, plug | -       | -       | 1) plugs are mounted on the opposite of the selected ports;<br>2) only U,U1 is available for bottom ported<br>3) No need this code if order manifold only |
| U     | U side with silencer, PC fitting          | φ 8     | φ 10    |   |
| N     | Station N with silencer, PC fitting       |         |         |   |
| UN    | Both side with silencer, PC fitting       |         |         |   |
| UL    | U side with silencer, PL fitting          |         |         |   |
| NL    | Station N with silencer, PL fitting       | φ 10    | φ 12    |   |
| UNL   | Both side with silencer, PL fitting       |         |         |   |
| U1    | U side with silencer, POC fitting         |         |         |   |
| N1    | Station N with silencer, POC fitting      |         |         |   |
| UN1   | Both side with silencer, POC fitting      |         |         |   |

Note: ①Y/H/U is not available for external pilot due to the air return.  
YK/HK/UK is available for external pilot due to the spring return.

#### Order Example:

1. Same valve: S series standard valve, 1 series body, top ported, 6 links 5/2 double controled SV5212, port size M5, DC24V, G thread, internal pilot, double control wiring, both side without silencer, fitting, pug, the ERP code is S1V-6D-M5E4
2. Mix different valve: S series standard valve, 1 series body, top ported, see right picture : station 1 is 5/3 center closed SV5312C, station 2 is 5/2 double control SV5212, station 3 is 2pcs 3/2 (N.O.) SV5412H , station 4 & station 5 are 5/2 single SV5211, station 6 is blind plate,station 1 & 2 with φ 6 one-touch fitting ZPOC06-M7C, station 3-5 with with φ 4 one-touch fitting ZPOC04-M7C, DC24V,G thread, external pilot, double control wiring, U-sub side with silencer, φ 8 PL fitting, with DIN rail clip and 1M guide rail, the ERP code is S1V-CDH2SB-2C63C4AE4-WB-UL-D
3. Mix different valve with pressure separate: S series standard valve, 1 series body, top ported, see right picture : station 1 is 5/3 center closed SV5312C, port 1 air supply pressure separate between station 1 and station 2,station 2 is 5/2 double control SV5212, station 3 is air supply & exhaust module ,station 4 is 2pcs 3/2 (N.O.) SV5412H port 1 air supply pressure separate between station 4 and station 5,station 5 is 5/2 single SV5211, station 6 is blind plate ,working port is M7 , DC24V, internal pilot, double control wiring,both sides without silencer, fittings ,plugs, G thread, the ERP code is S1V-CTADNHTASB-M7E4



# SV Series Solenoid Valve & Valve Terminal



1

SV

## Valve slice

| Series No.                       | Piping Type   | Ports      | Positions                  | Body Size                  | Controls                               | Original Status                   | Port Size                    | Voltage   | Pilot Type                                    | Wiring  | Thread Type                 |
|----------------------------------|---|------------|----------------------------|----------------------------|--|-----------------------------------|------------------------------|-----------|---|---|-----------------------------|
| S: Standard<br>SN: Energy-saving | V: Piping on valve<br>VM: Piping on manifold<br>(VM series should work with manifold) | 5: 5 ports | 1: 1 series<br>2: 2 series | 1: 1 series<br>2: 2 series | 1: Single control<br>2: Double control | (Note: Available for V type only) | M5: M5<br>M7: M7<br>06: 1/8" | E4: DC24V | Blank: Internal pilot<br>WB: External pilot ① | Blank: None<br>0.3M: 0.3m wiring<br>0.6M: 0.6m wiring<br>1M: 1m wiring<br>(Note: Available for V type only) | Blank: G<br>P: PT<br>T: NPT |

C: 3 position 5 port(center close)  
 P: 3 position 5 port(center pressure)  
 E: 3 position 5 port(center exhaust)  
 ① Y: Dual 3/2 valves(N.C.)  
 ① H: Dual 3/2 valves(N.O.)  
 ① U: Dual 3/2 valves(N.C./N.O.)  
 ① YK: Dual 3/2 valves(N.C.) spring return  
 ① HK: Dual 3/2 valves(N.O.) spring return  
 ① UK: Dual 3/2 valves(N.C./N.O.) spring return

Note: ①Y/H/U is not available for external pilot due to the air return.YK/HK/UK is available for external pilot due to the spring return(not available for standard valve group either separate use)

### Order Example:

S series standard type, piping on valve, 2 station 5 port, 1 series valve body, single control, M5 port, DC24V, internal pilot, 0.3 meter wiring. the ERP code is :SV5211-M5E4-0.3M.

## SV standard valve terminal

| Series No.                        | 5/2 way | Body Size                  | □   | □                                 | □ | □ | Voltage   | Manifold Port | Wiring   | Thread Type                 |
|-----------------------------------|---------|----------------------------|-----|-----------------------------------|---|---|-----------|---------------|--|-----------------------------|
| SV: Standard<br>SN: Energy-saving | 52      | 1: 1 series<br>2: 2 series | Qty | Valve quantity for different port |   |   | E4: DC24V |               | Blank: Without wiring<br>0.3M: 0.3M wiring<br>0.6M: 0.6M wiring<br>1M: 1M wiring | Blank: G<br>P: PT<br>T: NPT |

| Code | Function                           | Remark  |
|------|------------------------------------|---|
| S    | 5/2 single                         | assembly sequence, 1st link start from U side |
| D    | 5/2 double                         |   |
| C    | 5/3 center closed                  |   |
| P    | 5/3 center pressure                |   |
| E    | 5/3 center exhaust                 |   |
| Y ①  | 2pcs 3/2 (N.C.)                    |   |
| H ①  | 2pcs 3/2 (N.O.)                    |   |
| U ①  | 2pcs 3/2 (N.O./N.C.)               |   |
| YK ① | 2pcs 3/2 (N.C.) spring return      |   |
| HK ① | 2pcs 3/2 (N.O.) spring return      |   |
| UK ① | 2pcs 3/2 (N.O./N.C.) spring return |   |
| B    | blind plate                        |   |

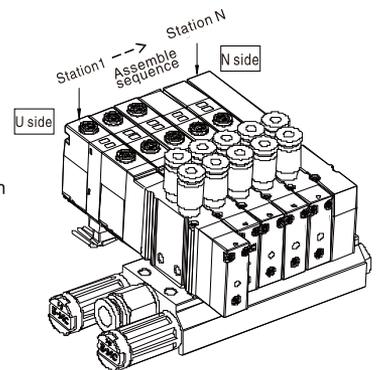
| No.     | Code | Port size                        | Remark  |
|---------|------|----------------------------------|---|
| 1Series | M5   | M5: M5 port                      | assembly sequence, 1st link start from U side |
|         | C4   | φ4 one-touch fitting(ZPOC04-M5C) |   |
|         | M7   | M7: M7 port                      |   |
|         | C6   | φ6 one-touch fitting(ZPOC06-M7C) |   |
| 2Series | 06   | 1/8 port                         |   |
|         | C4   | φ4 one-touch fitting(ZPOC04-01G) |   |
|         | C6   | φ6 one-touch fitting(ZPOC06-01G) |   |
|         | C8   | φ8 one-touch fitting(ZPOC08-01G) |   |

| Code  | Port entry                                | 1Series | 2Series | Remark  |
|-------|---|---------|---------|---|
| Blank | Both side without silencer, fitting, plug | -       | -       | 1) plugs are mounted on the opposite of the selected ports;<br>2) only U,U1,UL is available for bottom ported |
| U     | U side with silencer, φ8 PC fitting       | φ8      | φ10     |   |
| N     | Station N with silencer, φ8 PC fitting    |         |         |   |
| UN    | Both side with silencer, φ8 PC fitting    |         |         |   |
| UL    | U side with silencer, φ8 PL fitting       |         |         |   |
| NL    | Station N with silencer, φ8 PL fitting    | φ10     | φ12     |   |
| UNL   | Both side with silencer, φ8 PL fitting    |         |         |   |
| U1    | U side with silencer, φ10 POC fitting     |         |         |   |
| N1    | Station N with silencer, φ10 POC fitting  |         |         |   |
| UN1   | Both side with silencer, φ10 POC fitting  |         |         |   |

### Order Example:

1. Same valve: SV series valve block, 1 series body, 6 links 5/2 double controlled SV5212, port size M5, DC24V, G thread, both side without silencer, fitting, plug, the ERP code is SV521-6D-M5E4

2. Mix different valve: SV series valve block, 1 series body, see right picture : station 1 is 5/3 center closed SV5312C, station 2 is 5/2 double control SV5212, station 3 is 2pcs 3/2 (N.O.) SV5412H, station 4 & station 5 are 5/2 single SV5211, station 6 is blind plate. All working ports with ZPOC04-M5C fittings the ERP code is SV521-CDH2SB-C4E4-U



## How to Order?

### Manifold

| SV        | 52   | 1  | —                 | N           | F                           | — | Thread Type |
|-----------|--|--|-------------------|-------------|-----------------------------|---|-------------|
| SV series | 1: 1 series valve body<br>2: 2 series valve body | 1: 1 station<br>2: 2 stations<br>3: 3 stations<br>.....<br>24: 24 stations | 2 position 5 port | F: Manifold | Blank: G<br>P: PT<br>T: NPT |   |             |

### Connector

| Connector Type               | Cable Core   | Cable Length | Injection Molding |
|------------------------------|--|--------------|-------------------|
| D25: D-sub connector 25 pins | 1M: 1m cable<br>2M: 2m cable<br>3M: 3m cable<br>(Note: please contact EMC for customized length)   | A            |                   |
|                              | 25: 25 cores (24 coils or less)<br>15S: 15 cores (14 stations for single control or less)<br>15D: 15 cores (7 stations for double control or less)<br>08S: 8 cores (7 stations for single control or less) |              |                   |

### Wiring

| Wiring Series                                    | Category           | Wiring Length   |
|--|--------------------|---|
| SV5211: Single control<br>SV5212: Double control | P01: plug-in cable | 0.3M: 0.3m wiring<br>0.6M: 0.6m wiring<br>1M: 1m wiring<br>(Note: Please contact EMC to customize wiring) |

### Blind plate

| Series NO.  | Blind Plate Type                                | Category | 2 Position 5 Port | Valve Size               |
|-------------|---|----------|-------------------|--------------------------|
| S: Standard | V: Top port<br>VM: Side port<br>VY: Common type | BP       | 52                | 1:1 series<br>2:2 series |

### Air supply & exhaust module

| Series No.  | Body Size                  | Piping Type                      | Category | □ | — | Thread Type |
|-------------|----------------------------|----------------------------------|----------|---|---|-------------|
| S: Standard | 1: 1 series<br>2: 2 series | V: Top ported<br>VM: Side ported | NP       |   |   | Blank: G    |

| No.      | Code | Port size                         | Remark  |
|----------|------|-----------------------------------|---|
| 1 Series | M5   | M5: M5 port                       | when fittings required, the silencer will be mounted together |
|          | C4   | φ 4 one-touch fitting(ZPOC04-M5C) |   |
|          | M7   | M7: M7 port                       |   |
| 2 Series | C6   | φ 6 one-touch fitting(ZPOC06-M7C) |   |
|          | 06   | 1/8 port                          |   |
|          | C6   | φ 6 one-touch fitting(ZPOC06-01G) |   |
|          | C8   | φ 8 one-touch fitting(ZPOC08-01G) |   |

## Explain of pressure separate

| Diagram of pressure separate | Explain of pressure separate   |
|------------------------------|--|
|                              | <p>different options for pressure separate</p> <p>TA: port 1 air supply pressure separate </p> <p>TG: port 3/5 air exhaust pressure separate </p> <p>TL: port 1/3/5 air supply &amp; exhaust pressure separate </p>                            |
|                              | <p>1. 1pc Air supply &amp; exhaust module requests 1 station<br/>2. Use air supply &amp; exhaust module to control the third or more different pressure and exhaust.<br/>3. External pilot port 14 is not available for pressure separate.</p> |

# SV Series Solenoid Valve & Valve Terminal



## Specifications

| Model  | SV5211<br>SVM5211                         | SV5212<br>SVM5212 | SV5412Y/U/H<br>SVM5412Y/U/H                               | SV5412YK/UK/HK<br>SVM5412YK/UK/HK | SV5312C/E/P<br>SVM5312C/E/P | SV5221<br>SVM5221 | SV5222<br>SVM5222 | SV5422Y/U/H<br>SVM5422Y/U/H                               | SV5422YK/UK/HK<br>SVM5422YK/UK/HK | SV5322C/E/P<br>SVM5322C/E/P |
|--|---|-------------------|---|-----------------------------------|-----------------------------|-------------------|-------------------|---|-----------------------------------|-----------------------------|
| Sectional Area ( mm )                        | M5/C4: 5(CV=0.28)<br>M7/C6: 7(CV=0.39)    |                   | M5/C4: 4.6(CV=0.26)<br>M7/C6: 6.5(CV=0.36)                |                                   |                             | 16.2 ( CV=0.9 )   |                   | 14.5 ( CV=0.8 )   |                                   |                             |
| Positions                                    | 2 position 5 port                         |                   | dual 3/2 valves   |                                   | 3 position 5 port           | 2 position 5 port |                   | dual 3/2 valves   |                                   | 3 position 5 port           |
| Working Pressure ( MPa )                     | 0.15~0.8                                  |                   | 0.2~0.8   |                                   |                             | 0.15~0.8          |                   | 0.2~0.8   |                                   |                             |
| Pilot pressure<br>(external pilot type)(MPa) | 0.25~0.8                                  |                   | 0.25~0.8<br>(Exceed working pressure<br>0.1 Mpa at least) |                                   |                             | 0.25~0.8          |                   | 0.25~0.8<br>(Exceed working pressure<br>0.1 Mpa at least) |                                   | 0.25~0.8                    |
| Port Size                                    | M5/M7 ( Not available for VM series )     |                   |   |                                   |                             | G1/8              |                   |   |                                   |                             |
| Working Medium                               | Clean air(After 40µm filtration)          |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Pilot Exhaust Type                           | Internal pilot type / External pilot type |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Reset Type                                   | air return , air return+spring return     |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Lubrication                                  | No required                               |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Proof Pressure ( Mpa )                       | 1.2                                       |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Working Temperature ( °C )                   | -20~70 (No freezing)                      |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Working Voltage                              | DC24V                                     |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Voltage Range                                | ± 10%                                     |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Power Consumption                            | Standard: 0.8W, energy-saving: 0.35W      |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Insulation Class                             | F Class                                   |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Protective Class                             | IP40 Dust Proof                           |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Max.acting Frequency                         | 5/2: 5 cycles/s; 5/3: 3 cycles/s          |                   |   |                                   |                             |                   |                   |   |                                   |                             |
| Activate Time(0.5MPa)                        | 15ms or less                              |                   |   |                                   |                             | 20ms or less      |                   |   |                                   |                             |
| Weight (g)                                   | 55.5                                      | 64.5              | 65  | 65                                | 68                          | 88                | 97                | 98.5  | 98.5                              | 104                         |

## Symbol

