3-PORT DIRECT OPERATED SOLENOID VALVES
SS231
Poppet Seal/Sub-base Mounting type

SS231  2-position  Single solenoid

JIS Symbol

ORDERING INSTRUCTION

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Unit</th>
<th>SS231</th>
</tr>
</thead>
</table>

Port size  Voltage
| NB  | Without sub-base | 100 | AC100V/110V |
| M5  | M5 + Rc 3/8      | 200 | AC200V/220V |
| 01  | Rc 3/8           | D24 | DC24V      |

Wiring
- L  Lead wire
- G  Gromment with terminal
- C  Conduit with terminal
- *GK Gromment with surge suppressor
- *CK Conduit with surge suppressor
- D  DIN connector

Te Made to order

Option
- No mark  Without option (Standard)
- L  With locking button

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Unit</th>
<th>SS231</th>
</tr>
</thead>
</table>

Fluid  Non-lubricated/lubricated air
Port size  M5, Rc 3/8
Effective area  mm²  0.6
Cv value  0.03
Operating ambient temperature  °C  -5–60
Operating pressure range  MPa  0–1
Maximum frequency  Cycle/min  1200
Response time (at 0.5MPa)  s  ON 0.006, OFF 0.008
Rated voltage  V  AC100/110, 200/220, DC24
Grade of insulation  JIS grade B
Permissible voltage fluctuation  %  □10 (DC □ 10%)
Rated frequency  Hz  50/60

Power Consumption

<table>
<thead>
<tr>
<th>Holding</th>
<th>AC</th>
<th>50Hz</th>
<th>VA</th>
<th>3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60Hz</td>
<td>VA</td>
<td>2.6</td>
<td></td>
</tr>
</tbody>
</table>

Inrush

<table>
<thead>
<tr>
<th>50Hz</th>
<th>VA</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>60Hz</td>
<td>VA</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Power consumption DC  W  2
Mass  kg  0.08

(Note) 1. When temperature of valve site goes down below 5 °C, complete dry air shall be supplied to prevent from freezing.
2. Effective area shown above is value between ports 1 and 2.
3. Response time shown above is in accordance with JIS B 8375.
### CONSTRUCTION AND MAIN PARTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
</tr>
<tr>
<td>2</td>
<td>Plunger</td>
</tr>
<tr>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>4</td>
<td>Coil</td>
</tr>
<tr>
<td>5</td>
<td>Manual ring</td>
</tr>
<tr>
<td>6</td>
<td>Manual override</td>
</tr>
<tr>
<td>7</td>
<td>Cover</td>
</tr>
<tr>
<td>8</td>
<td>O-ring</td>
</tr>
<tr>
<td>9</td>
<td>Sub-base</td>
</tr>
</tbody>
</table>

### DIMENSIONS

(Unit: mm)

- **Type L**
  - Lead wire length 500
  - 2-M3 0.5 depth 6

- **Type C**
  - 2-M3 0.5 depth 6

- **Type G**
  - 2-M3 0.5 depth 6
**INDIVIDUAL WIRING TYPE MANIFOLD**

**MF □ - TI □ TC 1**

*Bar type*

**MF □ - TI1**  
Common SUP, Individual EXH  
Port 2 on side

**MF □ - TC1**  
Common SUP, Common EXH  
Port 2 on side

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### MANIFOLD SPECIFICATIONS

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>MF □-TI1-M5</th>
<th>MF □-TI1-01</th>
<th>MF □-TC1-M5</th>
<th>MF □-TC1-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port 1</td>
<td>M5</td>
<td>M5</td>
<td>M5</td>
<td>M5</td>
</tr>
<tr>
<td>Port 3</td>
<td>-</td>
<td>-</td>
<td>M5</td>
<td>M5</td>
</tr>
<tr>
<td>Port 2</td>
<td>M5</td>
<td>M5</td>
<td>M5</td>
<td>M5</td>
</tr>
<tr>
<td>Number of stations</td>
<td>2—10</td>
<td>2—10</td>
<td>2—10</td>
<td>2—10</td>
</tr>
<tr>
<td>Mountable solenoid valve</td>
<td>SS231-NB</td>
<td>SS231-MF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ORDERING INSTRUCTIONS

#### Manifold

- MF □ - TI □ TC 1-M5
- MF □ - TI □ TC 1-01

- □ Number of stations
  - 2: 2 station
  - 10: 10 station

- □ Type of manifold
  - TI: Common SUP, Individual EXH
  - TC: Common SUP, Common EXH

- □ Size of port 2
  - M5
  - M5: 0.8

#### Mountable solenoid valve

- SS231-NB
- SS231-MF

- □ Type of solenoid valve
  - NB: For TI
  - MF: For TC

- □ Voltage
  - 100: AC100V/110V
  - 200: AC200V/220V
  - 24: DC24V

- □ Wiring
  - L: Lead wire
  - G: Gromment with terminal
  - C: Conduit with terminal
  - *GK: Gromment with surge suppressor
  - *CK: Conduit with surge suppressor
  - D: DIN connector

- □ Option
  - No mark: Without option (Standard)
  - L: With locking button

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### HOW TO ORDER

List solenoid valves to be mounted.

*(Example)*

- MF5-TC1-M5: 1 pc.
- SS231-MF-100G: 5 pcs.
Specifications for connection

Port 1: Left side on dimensional drawing
Port size Rc1/8

Port 2: Front side on dimensional drawing
Port size Rc1/8

n: Number of stations

Specifications for connection

Port 1: Left side on dimensional drawing
Port size M5

Port 2: Front side on dimensional drawing
Port size M5

n: Number of stations
DMENSIONS
MF ̵ TC1-01 (Made to order) (Unit : mm)

Specifications for connection

- Port 1: Left side on dimensional drawing
  Port size Rc:\frac{1}{8}

- Port 2: Front side on dimensional drawing
  Port size Rc:\frac{1}{8}

- Port 3: Right side on dimensional drawing
  Port size Rc:\frac{1}{8}

n : Number of stations

MF ̵ TC1-M5 (Made to order) (Unit : mm)

Specifications for connection

- Port 1: Left side on dimensional drawing
  Port size M5

- Port 2: Front side on dimensional drawing
  Port size M5

- Port 3: Right side on dimensional drawing
  Port size M5

n : Number of stations