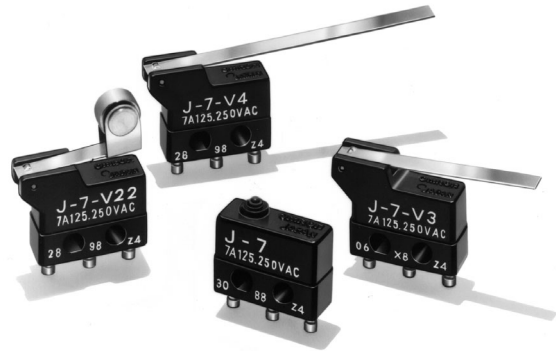


### Subminiature Models Capable of Large-capacity Loads

- Snap-action switch allows large-capacity switching (7 A at 250 VAC) in spite of its small size (8.9 × 12.7 × 5.1 mm).
- Particularly suitable as control switches for applications where there are restrictions on installation space and weight.
- Easy positioning, as the pin plunger is located in alignment with the center line of one of the two mounting holes.



### Ordering Information

#### Model Number Legend

J-7   -    

1    2    3

#### 1. Ratings

7: 7 A at 250 VAC

#### 2. Contact Material

None: Gold-plated silver

Y: Silver

#### 3. Actuator

None: Pin plunger

V: Short hinge lever







V3: Hinge lever

V4: Long hinge lever

V22: Short hinge roller lever

V2: Hinge roller lever

#### List of Models

| Actuator   | Model   |
|--|---------|
| Pin plunger               | J-7     |
| Short hinge lever         | J-7-V   |
| Hinge lever               | J-7-V3  |
| Long hinge lever          | J-7-V4  |
| Short hinge roller lever  | J-7-V22 |
| Hinge roller lever        | J-7-V2  |

**Note:** Externally mounted levers JAL and JAL2 are sold separately. Refer to page 208.

# Specifications

## ■ Ratings

| Rated voltage | Resistive load |
|---------------|----------------|
| 125 VAC       | 7 A            |
| 250 VAC       | 7 A            |

**Note:** The ratings values apply under the following test conditions:  
 Ambient temperature: 20±2°C  
 Ambient humidity: 65±5%  
 Operating frequency: 30 operations/min

## ■ Switching Capacity per Load (Reference Values)

| Voltage | Non-inductive load |    |           |       | Inductive load |    |            |        |
|---------|--------------------|----|-----------|-------|----------------|----|------------|--------|
|         | Resistive load     |    | Lamp load |       | Inductive load |    | Motor load |        |
|         | NC                 | NO | NC        | NO    | NC             | NO | NC         | NO     |
| 125 VAC | 7 A                |    | 1.5 A     | 0.7 A | 4 A            |    | 2.5 A      | 1.3 A  |
| 250 VAC | 7 A                |    | 1.5 A     | 0.7 A | 4 A            |    | 2.5 A      | 1.3 A  |
| 8 VDC   | 7 A                |    | 1.5 A     | 0.7 A | 3 A            |    | 2.5 A      | 1.3 A  |
| 14 VDC  | 7 A                |    | 1.5 A     | 0.7 A | 3 A            |    | 2.5 A      | 1.3 A  |
| 30 VDC  | 5 A                |    | 1.5 A     | 0.7 A | 3 A            |    | 2.5 A      | 1.3 A  |
| 125 VDC | 0.4 A              |    | 0.4 A     | 0.4 A | 0.03 A         |    | 0.03 A     | 0.03 A |
| 250 VDC | 0.2 A              |    | 0.2 A     | 0.2 A | 0.02 A         |    | 0.02 A     | 0.02 A |

**Note:** 1. The above values are for the steady-state current.  
 2. Inductive load has a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).  
 3. Lamp load has an inrush current of 10 times the steady-state current.  
 4. Motor load has an inrush current of 6 times the steady-state current.

## ■ Characteristics

|  |   |
|--|---|
| <b>Operating speed</b>                             | 0.05 mm to 1 m/s (pin plunger models)   |
| <b>Operating frequency</b>                         | Mechanical: 400 operations/min max.<br>Electrical: 30 operations/min max.   |
| <b>Insulation resistance</b>                       | 100 MΩ min. (at 500 VDC)  |
| <b>Contact resistance (initial value)</b>          | 15 mΩ max.  |
| <b>Dielectric strength</b>                         | 600 VAC, 50/60 Hz for 1 min between terminals of the same polarity<br>1,500 VAC, 50/60 Hz for 1 min between each terminal and non-current-carrying metal part and between current-carrying metal part and ground. |
| <b>Vibration resistance (see note 2)</b>           | Malfunction: 10 to 55 Hz, 1.5-mm double amplitude   |
| <b>Shock resistance (see note 2, 3)</b>            | Destruction: 1,000 m/s <sup>2</sup> {approx. 100G} max.<br>Malfunction: 200 m/s <sup>2</sup> {approx. 20G} max. (pin plunger models)  |
| <b>Durability (see note 4)</b>                     | Mechanical: 10,000,000 operations min. (60 operations/min)<br>Electrical: 50,000 operations min. (30 operations/min)  |
| <b>Degree of protection</b>                        | IEC IP40  |
| <b>Degree of protection against electric shock</b> | Class I   |
| <b>Proof tracking index (PTI)</b>                  | 175   |
| <b>Ambient operating temperature</b>               | -10°C to 80°C (at ambient humidity of 60% max.) (with no icing)   |
| <b>Ambient operating humidity</b>                  | 85% max. (for 5°C to 35°C)  |
| <b>Weight</b>                                      | Approx. 1 g (pin plunger models)  |

**Note:** 1. The data given above are initial values.  
 2. Malfunction: 1 ms max.  
 3. For the pin plunger models, the values are at the free position and total travel position. For the lever models, they are at the total travel position.  
 4. For testing conditions, consult your OMRON sales representative.

■ **Approved Standards**

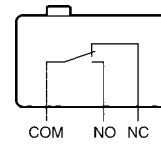
Consult your OMRON sales representative for specific models with standard approvals.

**UL508 (File No. E41515)/  
CSA C22.2 No. 55 (File No. LR21642)**

| Rated voltage | J-7 |
|---------------|-----|
| 125 VAC       | 7 A |
| 250 VAC       |     |

■ **Contact Form**

**SPDT**

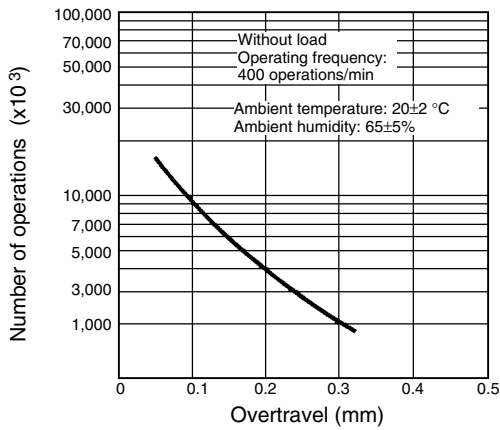


■ **Contact Specifications**

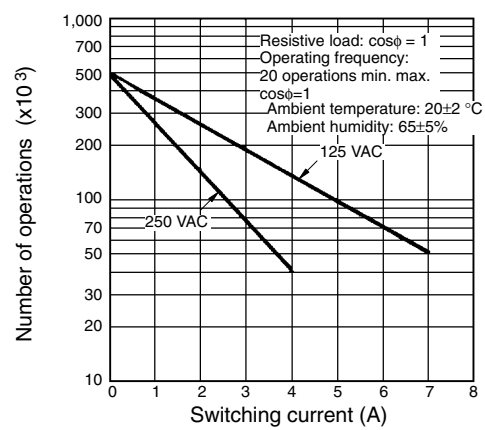
| Contact                 | Specification        | Rivet                        |
|-------------------------|----------------------|------------------------------|
|                         | Material             | Silver plated<br>Gold plated |
|                         | Gap (standard value) | 0.35 mm                      |
|                         | Inrush current       | NC<br>NO                     |
| Minimum applicable load |                      | 30 mA at 5 VDC               |

**Engineering Data (Reference Values)**

**Mechanical Durability**



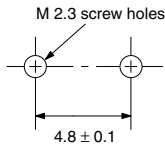
**Electrical Durability**



# Dimensions

## ■ Mounting Holes

**Note:** All units are in millimeters unless otherwise indicated.

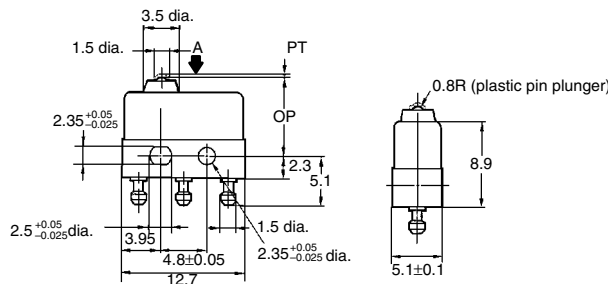
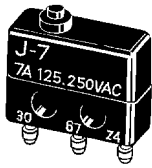


## ■ Dimensions and Operating Characteristics

- Note:**
1. All units are in millimeters unless otherwise indicated.
  2. Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.
  3. The operating characteristics are for operation in the A direction (▼).

### Pin Plunger Models

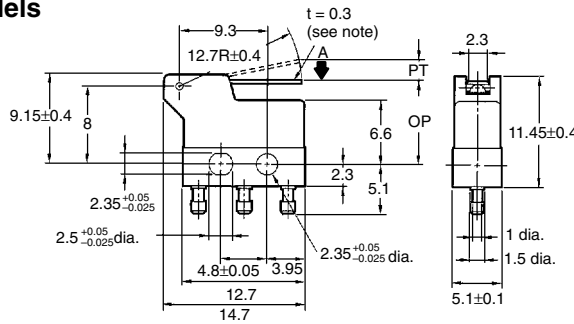
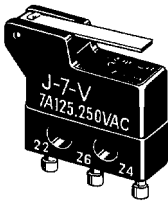
J-7



| Model   | J-7             |
|---------|-----------------|
| OF max. | 1.37 N {140 gf} |
| RF min. | 0.27 N {28 gf}  |
| PT max. | 0.6 mm          |
| OT min. | 0.1 mm          |
| MD max. | 0.15 mm         |
| OP      | 8.1 ± 0.3 mm    |

### Short Hinge Lever Models

J-7-V

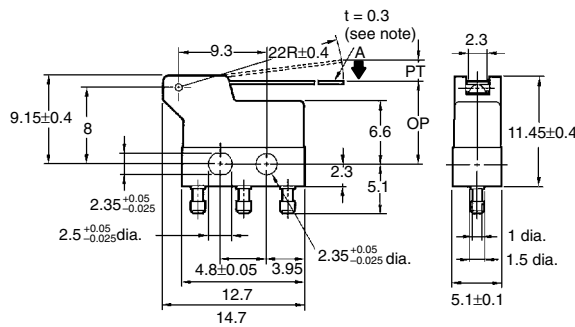
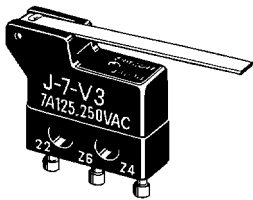


| Model   | J-7-V          |
|---------|----------------|
| OF max. | 0.49 N {50 gf} |
| RF min. | 0.08 N {9 gf}  |
| PT max. | 1.7 mm         |
| OT min. | 0.35 mm        |
| MD max. | 0.5 mm         |
| OP      | 8.3 ± 1.2 mm   |

**Note:** Stainless-steel spring lever

### Hinge Lever Models

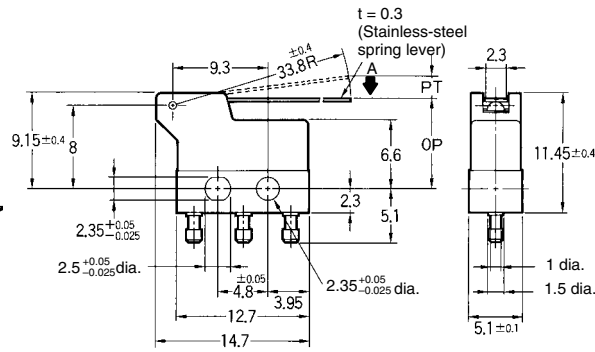
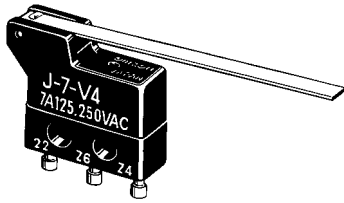
J-7-V3



| Model   | J-7-V3         |
|---------|----------------|
| OF max. | 0.29 N {30 gf} |
| RF min. | 0.04 N {5 gf}  |
| PT max. | 2.9 mm         |
| OT min. | 0.5 mm         |
| MD max. | 0.7 mm         |
| OP      | 8.3 ± 1.9 mm   |

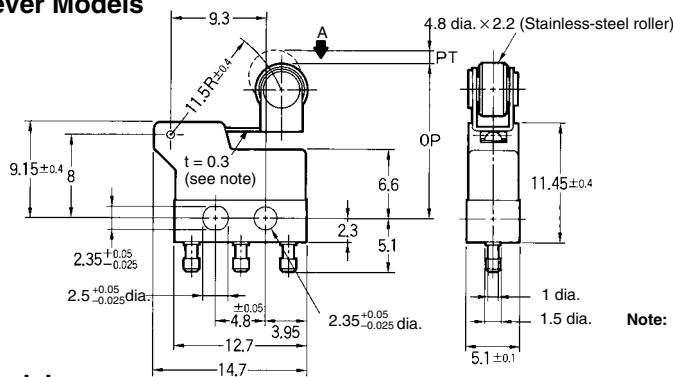
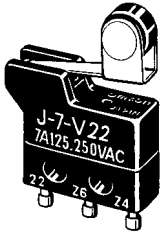
**Note:** Stainless-steel spring lever

**Long Hinge Lever Models**  
J-7-V4



| Model   | J-7-V4         |
|---------|----------------|
| OF max. | 0.20 N {20 gf} |
| RF min. | 0.02 N {3 gf}  |
| PT max. | 4.5 mm         |
| OT min. | 0.8 mm         |
| MD max. | 1.2 mm         |
| OP      | 8.3±2.9 mm     |

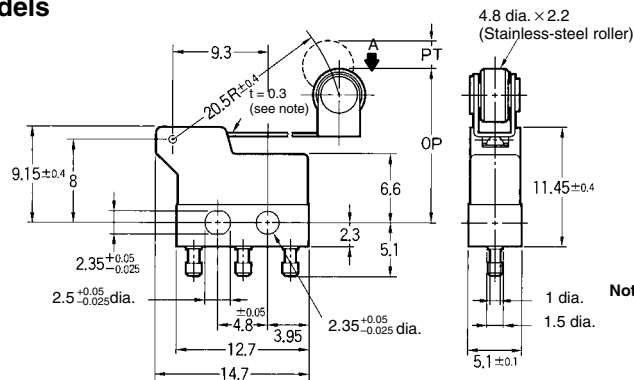
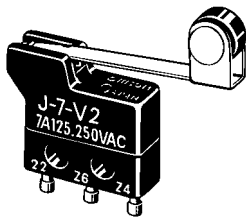
**Short Hinge Roller Lever Models**  
J-7-V22



| Model   | J-7-V22        |
|---------|----------------|
| OF max. | 0.54 N {55 gf} |
| RF min. | 0.04 N {5 gf}  |
| PT max. | 1.6 mm         |
| OT min. | 0.25 mm        |
| MD max. | 0.4 mm         |
| OP      | 14.7±1 mm      |

Note: Stainless-steel spring lever

**Hinge Roller Lever Models**  
J-7-V2



| Model   | J-7-V2          |
|---------|-----------------|
| OF max. | 0.324 N {33 gf} |
| RF min. | 0.02 N {3 gf}   |
| PT max. | 2.7 mm          |
| OT min. | 0.45 mm         |
| MD max. | 0.7 mm          |
| OP      | 14.7±1.9 mm     |

Note: Stainless-steel spring lever