

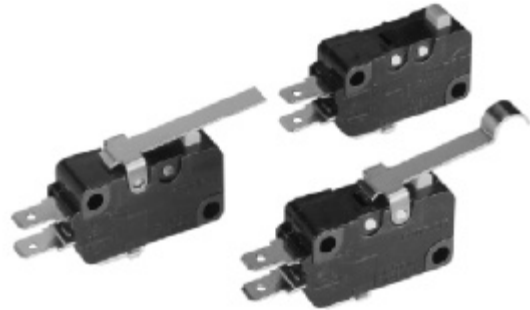


Miniature Snap Action Switch

D3V








Reliable and Safe Snap Action Switch with External Lever

- Environment-friendly - free of beryllium copper
- Maximum operating temperature of 105°C
- Self-cleaning contacts
- Available in 6-A, 11-A or 16-A models
- Available with internally or externally fitted levers
- Two operate positions for external levers
- Conforms to EN61058-1










Ordering Information

■ 16 A (OF: 200 GF)








| Item | | Part number | | |
|--|----------------|----------------|----------------|----------------|
| Actuator | Lever position | Contact form | | |
| | | SPDT | SPST-NC | SPST-NO |
| Pin plunger  | --- | D3V-16G-1□5Δ | D3V-16G-2□5Δ | D3V-16G-3□5Δ |
| Short hinge lever  | Internal | D3V-16G1-1□5Δ | D3V-16G1-2□5Δ | D3V-16G1-3□5Δ |
| | External | D3V-16G1M-1□5Δ | D3V-16G1M-2□5Δ | D3V-16G1M-3□5Δ |
| Hinge lever  | Internal | D3V-16G2-1□5Δ | D3V-16G2-2□5Δ | D3V-16G2-3□5Δ |
| | External | D3V-16G2M-1□5Δ | D3V-16G2M-2□5Δ | D3V-16G2M-3□5Δ |
| Long hinge lever  | Internal | D3V-16G3-1□5Δ | D3V-16G3-2□5Δ | D3V-16G3-3□5Δ |
| | External | D3V-16G3M-1□5Δ | D3V-16G3M-2□5Δ | D3V-16G3M-3□5Δ |
| Simulated roller lever  | Internal | D3V-16G4-1□5Δ | D3V-16G4-2□5Δ | D3V-16G4-3□5Δ |
| | External | D3V-16G4M-1□5Δ | D3V-16G4M-2□5Δ | D3V-16G4M-3□5Δ |
| Short hinge roller lever  | Internal | D3V-16G5-1□5Δ | D3V-16G5-2□5Δ | D3V-16G5-3□5Δ |
| | External | D3V-16G5M-1□5Δ | D3V-16G5M-2□5Δ | D3V-16G5M-3□5Δ |
| Hinge roller lever  | Internal | D3V-16G6-1□5Δ | D3V-16G6-2□5Δ | D3V-16G6-3□5Δ |
| | External | D3V-16G6M-1□5Δ | D3V-16G6M-2□5Δ | D3V-16G6M-3□5Δ |

■ 11 A (OF: 200 GF)

| Item | | Part number | | |
|--|----------------|----------------|----------------|----------------|
| Actuator | Lever position | Contact form | | |
| | | SPDT | SPST-NC | SPST-NO |
| Pin plunger  | --- | D3V-11G-1□5Δ | D3V-11G-2□5Δ | D3V-11G-3□5Δ |
| Short hinge lever  | Internal | D3V-11G1-1□5Δ | D3V-11G1-2□5Δ | D3V-11G1-3□5Δ |
| | External | D3V-11G1M-1□5Δ | D3V-11G1M-2□5Δ | D3V-11G1M-3□5Δ |
| Hinge lever  | Internal | D3V-11G2-1□5Δ | D3V-11G2-2□5Δ | D3V-11G2-3□5Δ |
| | External | D3V-11G2M-1j5Δ | D3V-11G2M-2□5Δ | D3V-11G2M-3□5Δ |
| Long hinge lever  | Internal | D3V-11G3-1□5Δ | D3V-11G3-2□5Δ | D3V-11G3-3□5Δ |
| | External | D3V-11G3M-1□5Δ | D3V-11G3M-2□5Δ | D3V-11G3M-3□5Δ |
| Simulated roller lever  | Internal | D3V-11G4-1□5Δ | D3V-11G4-2□5Δ | D3V-11G4-3□5Δ |
| | External | D3V-11G4M-1□5Δ | D3V-11G4M-2□5Δ | D3V-11G4M-3□5Δ |
| Short hinge roller lever  | Internal | D3V-11G5-1□5Δ | D3V-11G5-2□5Δ | D3V-11G5-3□5Δ |
| | External | D3V-11G5M-1□5Δ | D3V-11G5M-2□5Δ | D3V-11G5M-3□5Δ |
| Hinge roller lever  | Internal | D3V-11G6-1□5Δ | D3V-11G6-2□5Δ | D3V-11G6-3□5Δ |
| | External | D3V-11G6M-1□5Δ | D3V-11G6M-2□5Δ | D3V-11G6M-3□5Δ |

Note: The □ in the model number is for the terminal code.
 A: Solder/quick-connect terminals (#187)
 C2: Quick-connect terminals (#187)
 C: Quick-connect terminals (#250)
 The Δ in the model number is for the mounting hole size.
 None: 3.1 mm
 K: 2.9 mm

■ 11 A (OF: 100 GF)

| Item | | Part number | | | |
|--|----------------|----------------|----------------|----------------|--|
| Actuator | Lever position | Contact form | | | |
| | | SPDT | SPST-NC | SPST-NO | |
| Pin plunger  | --- | D3V-11G-1□4Δ | D3V-11G-2□4Δ | D3V-11G-3□4Δ | |
| Short hinge lever  | Internal | D3V-11G1-1□4Δ | D3V-11G1-2□4Δ | D3V-11G1-3□4Δ | |
| | External | D3V-11G1M-1□4Δ | D3V-11G1M-2□4Δ | D3V-11G1M-3□4Δ | |
| Hinge lever  | Internal | D3V-11G2-1□4Δ | D3V-11G2-2□4Δ | D3V-11G2-3□4Δ | |
| | External | D3V-11G2M-1□4Δ | D3V-11G2M-2□4Δ | D3V-11G2M-3□4Δ | |
| Long hinge lever  | Internal | D3V-11G3-1□4Δ | D3V-11G3-2□4Δ | D3V-11G3-3□4Δ | |
| | External | D3V-11G3M-1□4Δ | D3V-11G3M-2□4Δ | D3V-11G3M-3□4Δ | |
| Simulated roller lever  | Internal | D3V-11G4-1□4Δ | D3V-11G4-2□4Δ | D3V-11G4-3□4Δ | |
| | External | D3V-11G4M-1□4Δ | D3V-11G4M-2□4Δ | D3V-11G4M-3□4Δ | |
| Short hinge roller lever  | Internal | D3V-11G5-1□4Δ | D3V-11G5-2□4Δ | D3V-11G5-3□4Δ | |
| | External | D3V-11G5M-1□4Δ | D3V-11G5M-2□4Δ | D3V-11G5M-3□4Δ | |
| Hinge roller lever  | Internal | D3V-11G6-1□4Δ | D3V-11G6-2□4Δ | D3V-11G6-3□4Δ | |
| | External | D3V-11G6M-1□4Δ | D3V-11G6M-2□4Δ | D3V-11G6M-3□4Δ | |

Note: The □ in the model number is for the terminal code.

A: Solder/quick-connect terminals (#187)

C2: Quick-connect terminals (#187)








C: Quick-connect terminals (#250)

The Δ in the model number is for the mounting hole size.

None: 3.1 mm

K: 2.9 mm

■ 6 A (OF: 100 GF)

| Item | | Part number | | |
|--|----------------|---------------|---------------|---------------|
| Actuator | Lever position | Contact form | | |
| | | SPDT | SPST-NC | SPST-NO |
| Pin plunger  | --- | D3V-6G-1□4Δ | D3V-6G-2□4Δ | D3V-6G-3□4Δ |
| Short hinge lever  | Internal | D3V-6G1-1□4Δ | D3V-6G1-2□4Δ | D3V-6G1-3□4Δ |
| | External | D3V-6G1M-1□4Δ | D3V-6G1M-2□4Δ | D3V-6G1M-3□4Δ |
| Hinge lever  | Internal | D3V-6G2-1□4Δ | D3V-6G2-2□4Δ | D3V-6G2-3□4Δ |
| | External | D3V-6G2M-1□4Δ | D3V-6G2M-2□4Δ | D3V-6G2M-3□4Δ |
| Long hinge lever  | Internal | D3V-6G3-1□4Δ | D3V-6G3-2□4Δ | D3V-6G3-3□4Δ |
| | External | D3V-6G3M-1□4Δ | D3V-6G3M-2□4Δ | D3V-6G3M-3□4Δ |
| Simulated roller lever  | Internal | D3V-6G4-1□4Δ | D3V-6G4-2□4Δ | D3V-6G4-3□4Δ |
| | External | D3V-6G4M-1□4Δ | D3V-6G4M-2□4Δ | D3V-6G4M-3□4Δ |
| Short hinge roller lever  | Internal | D3V-6G5-1□4Δ | D3V-6G5-2□4Δ | D3V-6G5-3□4Δ |
| | External | D3V-6G5M-1□4Δ | D3V-6G5M-2□4Δ | D3V-6G5M-3□4Δ |
| Hinge roller lever  | Internal | D3V-6G6-1□4Δ | D3V-6G6-2□4Δ | D3V-6G6-3□4Δ |
| | External | D3V-6G6M-1□4Δ | D3V-6G6M-2□4Δ | D3V-6G6M-3□4Δ |

Note: The □ in the model number is for the terminal code.
 A: Solder/quick-connect terminals (#187)
 C2: Quick-connect terminals (#187)
 C: Quick-connect terminals (#250)
 The Δ in the model number is for the mounting hole size.
 None: 3.1 mm
 K: 2.9 mm

Specifications

■ CHARACTERISTICS

| | | |
|---|-------------|---|
| Operating speed | | 0.1 mm to 1 m/s (at pin plunger models) |
| Operating frequency | Mechanical | 600 operations/min |
| | Electrical | 60 operations/min |
| Insulation resistance | | 100 MΩ min. (at 500 VDC) |
| Contact resistance | | 15 mΩ max. (initial value) |
| Dielectric strength | | 1,000 VAC, 50/60 Hz for 1 min between terminals of the same polarity |
| | | 2,000 VAC, 50/60 Hz for 1 min between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal parts (See Note 1.) |
| Vibration resistance (See Note 2.) | Malfunction | 10 to 55 Hz, 1.5-mm double amplitude |
| Shock resistance (see note 2) | Destruction | 1,000 m/s ² approx. 100G max. |
| | Malfunction | 300 m/s ² approx. 30G max. |
| Life expectancy (See Note 3.) | Mechanical | 10,000,000 operations min. |
| | Electrical | D3V-16: 100,000 operations min. D3V-11: 200,000 operations min. D3V-6: 500,000 operations min. |
| Degree of protection | | IP00 |
| Degree of protection against electric shock | | Class I |
| Proof tracking index (PTI) | | 250 |
| Switch category | | D (IEC335-1) |
| Ambient temperature | Operating | -25°C to 105°C (-13°F to 221°F) with no icing |
| Ambient humidity | Operating | 85% max. for 5°C to 35°C (41°F to 95°F) |
| Weight | | Approx. 6.2 g (pin plunger model) |

- Note: 1. The dielectric strength values shown in the table are for models with a Separator.
 2. For the pin plunger models, the above values apply for use at both the free position and total travel position. For the lever models, they apply at the total travel position.
 3. For testing conditions, contact your OMRON sales representative.

■ OPERATING CHARACTERISTICS

| Characteristics | Part number | | | | | |
|-----------------|------------------------------|-----------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|
| | D3V-16G-1□5Δ D3V-11G-1□5Δ | D3V-11G-1□4Δ D3V-6G-1□4Δ | D3V-16G1M-1□5Δ D3V-11G1M-1□5Δ | D3V-11G1M-1□4Δ D3V-6G1M-1□4Δ | D3V-16G2M-1□5Δ D3V-11G2M-1□5Δ | D3V-11G2M-1□4Δ D3V-6G2M-1□4Δ |
| OF max. | 200 gf | 100 gf | 200 gf | 100 gf | 125 gf | 60 gf |
| RF min. | 50 gf | 15 gf | 50 gf | 15 gf | 14 gf | 6 gf |
| PT max. | 1.2 mm | | 1.6 mm | | 4.0 mm | |
| OT min. | 1.0 mm | | 0.8 mm | | 1.6 mm | |
| MD max. | 0.4 mm | | 0.6 mm | | 1.5 mm | |
| OP | 14.7±0.4 mm | | 15.2±0.5 mm | | 15.2±1.2 mm | |

| Characteristics | Part number | | | | |
|-----------------|---|---------------------------------|----------------------------------|---------------------------------|---------------------------------|
| | D3V-16G3M-1□5Δ D3V-11G3M-1□5Δ | D3V-11G3M-1□4Δ D3V-6G3M-1□4Δ | D3V-16G4M-1□5Δ D3V-11G4M-1□5Δ | D3V-11G4M-1□4Δ D3V-6G4M-1□4Δ | D3V-16G5M-□5Δ D3V-11G5M-1□5Δ |
| OF max. | 70 gf | 35 gf | 125 g | 60 gf | 240 gf |
| RF min. | 6 gf | --- | 14 gf | 6 gf | 50 gf |
| PT max. | 9.0 mm | | 4.0 mm | | 1.6 mm |
| OT min. | 2.0 mm | | 1.6 mm | | 0.8 mm |
| MD max. | 2.8 mm | | 1.5 mm | | 0.6 mm |
| OP | 15.2 ^{+2.6} _{-3.2} mm | | 18.7±1.2 mm | | 20.7±0.6 mm |

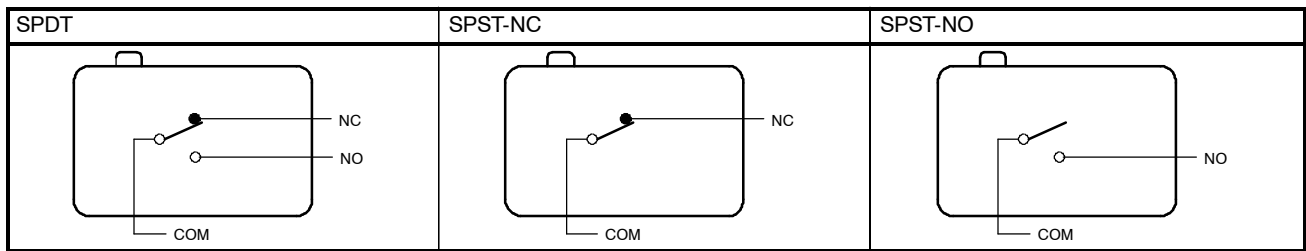
| Characteristics | Part number | | |
|-----------------|---------------------------------|----------------------------------|---------------------------------|
| | D3V-11G5M-1□4Δ D3V-6G5M-1□4Δ | D3V-16G6M-1□5Δ D3V-11G6M-1□5Δ | D3V-11G6M-1□4Δ D3V-6G6M-1□4Δ |
| OF max. | 120 gf | 125 gf | 60 gf |
| RF min. | 15 gf | 14 gf | 6 gf |
| PT max. | 1.6 mm | 4.0 mm | |
| OT min. | 0.8 mm | 1.6 mm | |
| MD max. | 0.6 mm | 1.5 mm | |
| OP | 20.7±0.6 mm | 20.7±1.2 mm | |

■ RATINGS

| Type | Rated voltage | Non-inductive load | | | | Inductive load | | | |
|---------|---------------|--------------------|----|-----------|----|----------------|----|------------|----|
| | | Resistive load | | Lamp load | | Inductive load | | Motor load | |
| | | NC | NO | NC | NO | NC | NO | NC | NO |
| D3V-16G | 250 VAC | 16 A | | 2 A | | 10 A | | 3 A | |
| | 8 VDC | 16 A | | 4 A | | 10 A | | 6 A | |
| | 30 VDC | 10 A | | 4 A | | 10 A | | 4 A | |
| | 125 VDC | 0.6 A | | 0.1 A | | 0.6 A | | 0.1 A | |
| | 250 VDC | 0.3 A | | 0.05 A | | 0.3 A | | 0.05 A | |
| D3V-11G | 250 VAC | 11 A | | 1.5 A | | 6 A | | 2 A | |
| | 8 VDC | 11 A | | 3 A | | 6 A | | 3 A | |
| | 30 VDC | 6 A | | 3 A | | 6 A | | 3 A | |
| | 125 VDC | 0.6 A | | 0.1 A | | 0.6 A | | 0.1 A | |
| | 250 VDC | 0.3 A | | 0.05 A | | 0.3 A | | 0.05 A | |
| D3V-6G | 250 VAC | 6 A | | 3 A | | 4 A | | --- | |
| | 8 VDC | 6 A | | 3 A | | 4 A | | --- | |
| | 30 VDC | 6 A | | 3 A | | 4 A | | --- | |
| | 125 VDC | 0.4 A | | 0.1 A | | 0.4 A | | --- | |
| | 250 VDC | 0.3 A | | 0.05 A | | 0.2 A | | --- | |

- Note: 1. Above current values are normal for models with a contact gap of 0.5mm and models with a contact gap of 1mm.
 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.
 5. The ratings values apply under the following test conditions:
 Ambient temperature: 20±2°C
 Ambient humidity: 65±5%
 Operating frequency: 60 operations/min

■ CONTACT FORM



■ APPROVED STANDARDS

UL1054 (File No. E41515) CSA C22.2 No.55 (File No. LR21642)
 (Standard Ratings Only is listed.)

| Rated voltage | D3V-16 | D3V-16G | D3V-11 | D3V-11G | D3V-6 |
|---------------|--------------|--------------|--------------|--------------|-------------|
| 125 VAC | 16 A, 1/2 HP | 16 A, 1/2 HP | 11 A, 1/2 HP | 11 A, 1/2 HP | 6 A, 1/4 HP |
| 250 VAC | 16 A, 1/2 HP | 16 A, 1/2 HP | 11 A, 1/2 HP | 11 A, 1/2 HP | 6 A, 1/4 HP |
| 125 VDC | 0.6 A | 0.1 A | 0.6 A | 0.1 A | --- |
| 250 VDC | 0.3 A | --- | 0.3 A | --- | --- |

■ EN 61058-1: 1992+A1: 1993 (LICENSE NO. 119151L)

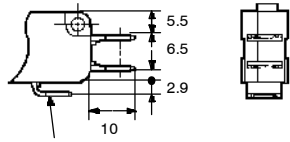
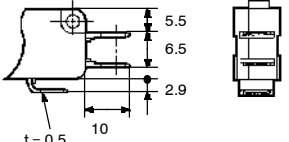
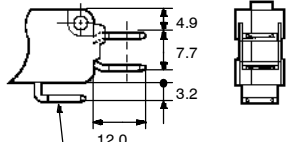
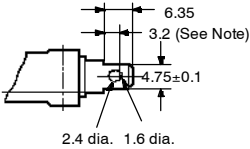
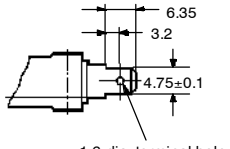
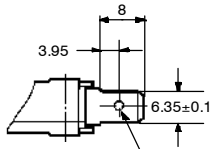
| Rated voltage | D3V-16 | D3V-11 | D3V-6 |
|---------------|----------|----------|---------|
| 250 VAC | 16 (3) A | 11 (3) A | 6 (2) A |

Testing conditions: 50,000 operations, T105 (0°C to 105°C)

Dimensions

Unit: mm (inch)

■ TERMINALS

| Terminal type | Solder/Quick-connect Terminal (#187) (A) | Quick-connect Terminal (#187) (C2) | Quick-connect Terminal (#250) (C) |
|---------------------|---|--|--|
| COM |  <p>t = 0.5 Three, solder/quick-connect terminals (#187)</p> |  <p>t = 0.5 Three, quick-connect terminals (#187)</p> |  <p>t = 0.8 Three, quick-connect terminals (#250)</p> |
| Terminal dimensions |  <p>Note: Indicates the length to the center of the 1.6-dia. holes</p> |  <p>1.6-dia. terminal hole</p> |  <p>1.65-dia. terminal hole</p> |

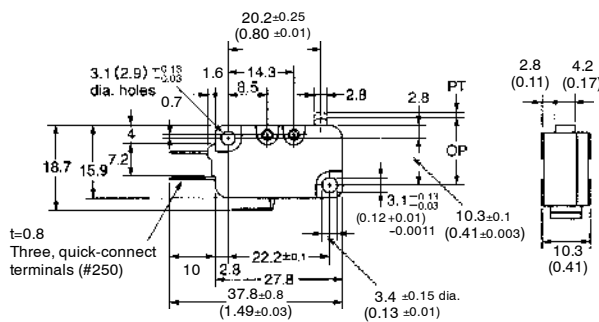
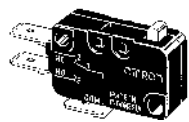
Note: The above is for the SPDT contact specifications. Two terminals will be available for SPST-NO or SPST-NC contact specifications. For terminal positions, refer to the above *Contact Form*.

■ DIMENSIONS AND OPERATING CHARACTERISTICS

- Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.
- The following illustrations and drawings are for quick-connect terminals (#250) (terminals C). D3V models incorporate terminals A and C2. These models are different from #250 models in terminal size only. Terminals A and C2 are omitted from the following drawings. Refer to *Terminals* (above).
- The following illustrations and drawings are for models with the hinge position set to external/further than plunger. Models with the hinge position set to internal position are not shown here. For details about the internal position models, contact your OMRON sales representative. Operating characteristics are the same for these two types of models.
- The □ in the model number is for the terminal code.
- The Δ in the model number is for the mounting hole size.
The hole size in the following illustrations of models with a suffix "K" in the Δ is 2.9 mm.

■ PIN PLUNGER

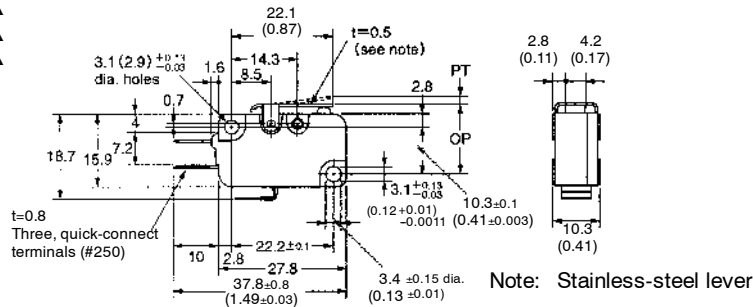
D3V-16G-1□5Δ
D3V-11G-1□5Δ
D3V-11G-1□4Δ
D3V-6G-1□4Δ



Unit: mm (inch)

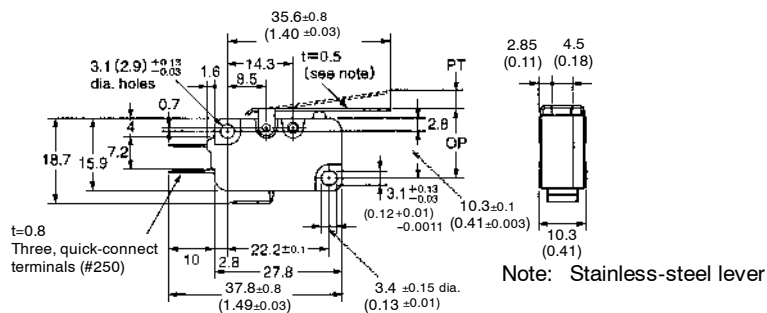
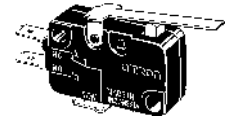
SHORT HINGE LEVER

- D3V-16G1M-1□5△
- D3V-11G1M-1□5△
- D3V-11G1M-1□4△
- D3V-6G1M-1□4△



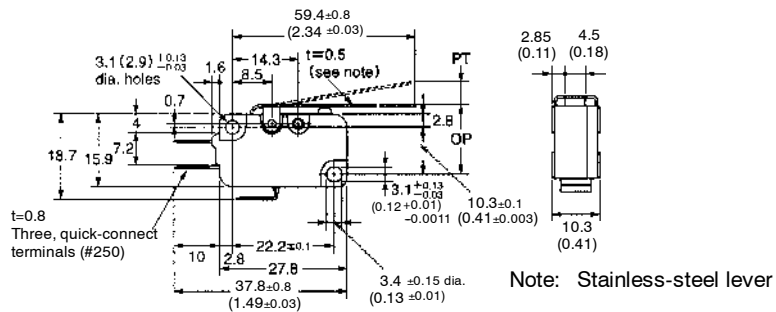
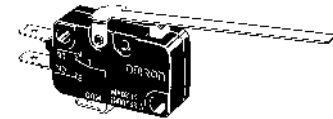
HINGE LEVER

- D3V-16G2M-1□5△
- D3V-11G2M-1□5△
- D3V-11G2M-1□4△
- D3V-6G2M-1□4△



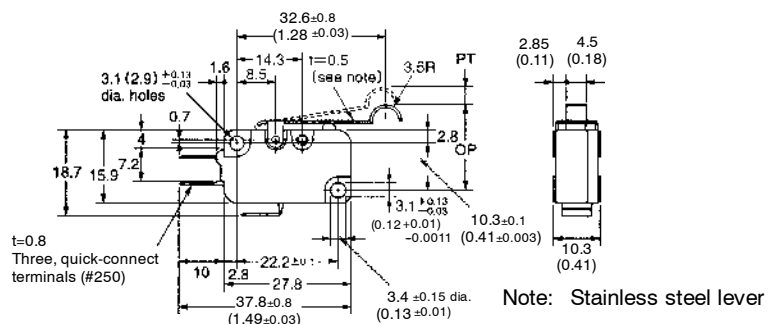
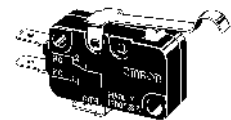
LONG HINGE LEVER

- D3V-16G3M-1□5△
- D3V-11G3M-1□5△
- D3V-11G3M-1□4△
- D3V-6G3M-1□4△



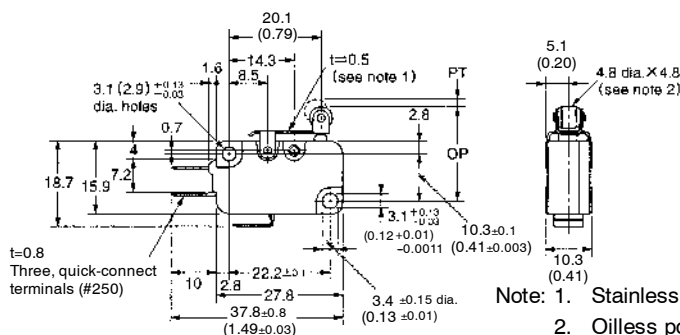
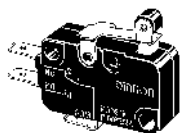
SIMULATED ROLLER LEVER

- D3V-16G4M-1□5△
- D3V-11G4M-1□5△
- D3V-11G4M-1□4△
- D3V-6G4M-1□4△



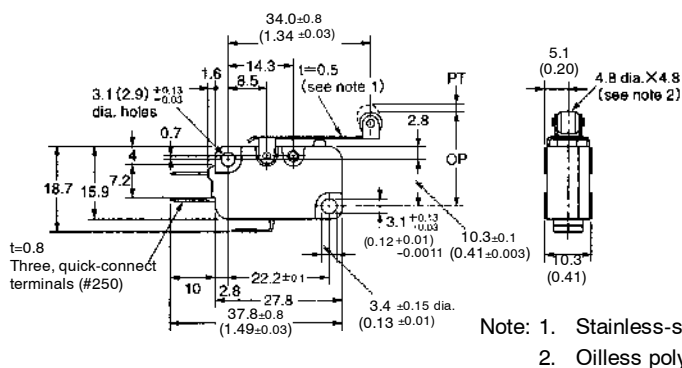
SHORT HINGE ROLLER LEVER

- D3V-16G5M-1 □5△
- D3V-11G5M-1 □5△
- D3V-11G5M-1 □4△
- D3V-6G5M-1 □4△



HINGE ROLLER LEVER

- D3V-16G6M-1 □5△
- D3V-11G6M-1 □5△
- D3V-11G6M-1 □4△
- D3V-6G6M-1 □4△

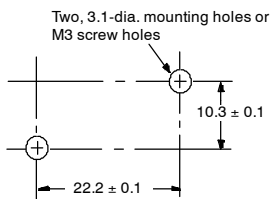


Precautions

MOUNTING DIMENSIONS

Use two M3 mounting screws with an appropriate screwdriver to mount the switch. Tighten the screws to a torque of 0.39 to 0.59 N · m {4 to 6 kgf · cm}.

Mounting Holes



NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

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