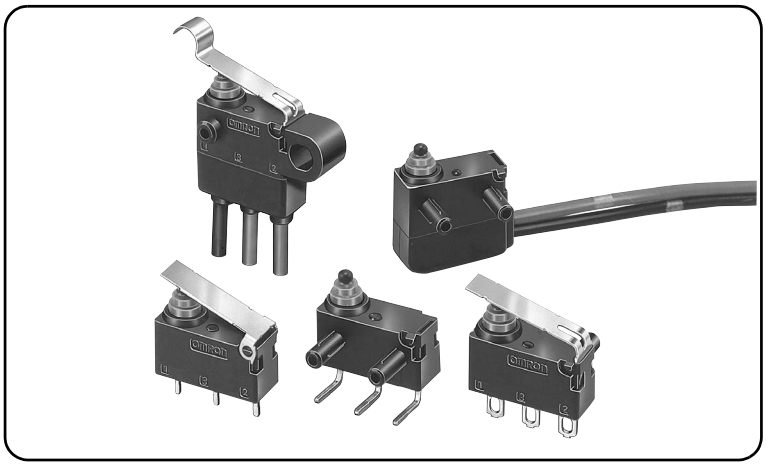
# D2HW

## Sealed Ultra Subminiature Basic Switch

## Smallest sealed snap-action switch in the industry with a very long stroke for reliable ON/OFF action

- **The case dimensions are 78% of conventional models, contributing to down-sizing of mechanical modules.**
- **Extra-long stroke even without levers. (OT reference value: 1.4 mm).**
- **Made of environmentally-friendly materials. All models are lead-free, including molded lead wire models.**

**RoHS Compliant**





## Model Number Legend

D2HW - 1 2 3 4 5

**1. Mounting Structure**
- A : Without posts (base-mounting)
- BR : Post on right
- BL : Post on left
- C : M3-screw mounting models

**2. Raitings**
- 2 : 5 VDC 1mA to 12 VDC 2A

**3. Actuator**
- 0 : Pin plunger
- 1 : Hinge lever
- 2 : Long hinge lever
- 3 : Simulated roller lever
- 4 : Hinge roller lever
- 6 : Leaf lever
- 7 : Simulated roller leaf lever
- 8 : Long leaf lever

**4. Contact form**
- 1 : SPDT
- 2 : SPST-NC (Molded lead wire models only)
- 3 : SPST-NO (Molded lead wire models only)

**5. Terminals**
- D, DS : PCB terminals (Straight)
- DR, DRS : PCB Terminals (Right-angled)
- DL, DLS : PCB Terminals (Left-angled)
- H, HS : Solder terminals
- M, MS : Molded lead wires downwards
- MR, MRS : Molded lead wires on right-side
- ML, MLS : Molded lead wires on left-side

Note. UL/CSA approved versions are available.
In this case, a "S" will be added to the end of the model number.
The Lead wire is a UL approved wire (AWG24, UL1007).

## List of Models

### ●PCB-mounted Models

| Actuator | Terminals | | Contact form | List of Models: With posts on right | With posts on left | Without posts |
|---|---|---|---|---|---|---|
| Pin plunger | For PCB | Straight | SPDT | - | - | D2HW-A201D |
| | | Angled | | D2HW-BR201DR | D2HW-BL201DL | - |
| Hinge lever | | Straight | | - | - | D2HW-A211D |
| | | Angled | | D2HW-BR211DR | D2HW-BL211DL | - |
| Long hinge lever | | Straight | | - | - | D2HW-A221D |
| | | Angled | | D2HW-BR221DR | D2HW-BL221DL | - |
| Simulated roller hinge lever | | Straight | | - | - | D2HW-A231D |
| | | Angled | | D2HW-BR231DR | D2HW-BL231DL | - |

Note1. Angled terminals and posts are the same direction.
Note2. "S" is added to the end of the model number for the UL/CSA-approved version Consult your OMRON sales representative for details.

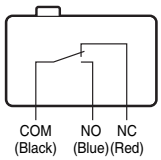
### ●Models with Solder Terminals or Molded Lead Wires

| Actuator | Terminals | | Contact form | List of Models: With posts on right | With posts on left | M3-screw mounting |
|---|---|---|---|---|---|---|
| Pin plunger | Solder | | SPDT | D2HW-BR201H | D2HW-BL201H | D2HW-C201H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR201M | D2HW-BL201M | D2HW-C201M |
| | | | SPST-NC | D2HW-BR202M | D2HW-BL202M | D2HW-C202M |
| | | | SPST-NO | D2HW-BR203M | D2HW-BL203M | D2HW-C203M |
| | | Right-side | SPST-NC | D2HW-BR202MR | D2HW-BL202MR | D2HW-C202MR |
| | | | SPST-NO | D2HW-BR203MR | D2HW-BL203MR | D2HW-C203MR |
| | | Left-side | SPST-NC | D2HW-BR202ML | D2HW-BL202ML | - |
| | | | SPST-NO | D2HW-BR203ML | D2HW-BL203ML | - |
| Hinge lever | Solder | | SPDT | D2HW-BR211H | D2HW-BL211H | D2HW-C211H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR211M | D2HW-BL211M | D2HW-C211M |
| | | | SPST-NC | D2HW-BR212M | D2HW-BL212M | D2HW-C212M |
| | | | SPST-NO | D2HW-BR213M | D2HW-BL213M | D2HW-C213M |
| | | Right-side | SPST-NC | D2HW-BR212MR | D2HW-BL212MR | D2HW-C212MR |
| | | | SPST-NO | D2HW-BR213MR | D2HW-BL213MR | D2HW-C213MR |
| | | Left-side | SPST-NC | D2HW-BR212ML | D2HW-BL212ML | - |
| | | | SPST-NO | D2HW-BR213ML | D2HW-BL213ML | - |
| Long hingelever | Solder | | SPDT | D2HW-BR221H | D2HW-BL221H | D2HW-C221H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR221M | D2HW-BL221M | D2HW-C221M |
| | | | SPST-NC | D2HW-BR222M | D2HW-BL222M | D2HW-C222M |
| | | | SPST-NO | D2HW-BR223M | D2HW-BL223M | D2HW-C223M |
| | | Right-side | SPST-NC | D2HW-BR222MR | D2HW-BL222MR | D2HW-C222MR |
| | | | SPST-NO | D2HW-BR223MR | D2HW-BL223MR | D2HW-C223MR |
| | | Left-side | SPST-NC | D2HW-BR222ML | D2HW-BL222ML | - |
| | | | SPST-NO | D2HW-BR223ML | D2HW-BL223ML | - |
| Simulated roller hinge lever | Solder | | SPDT | D2HW-BR231H | D2HW-BL231H | D2HW-C231H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR231M | D2HW-BL231M | D2HW-C231M |
| | | | SPST-NC | D2HW-BR232M | D2HW-BL232M | D2HW-C232M |
| | | | SPST-NO | D2HW-BR233M | D2HW-BL233M | D2HW-C233M |
| | | Right-side | SPST-NC | D2HW-BR232MR | D2HW-BL232MR | D2HW-C232MR |
| | | | SPST-NO | D2HW-BR233MR | D2HW-BL233MR | D2HW-C233MR |
| | | Left-side | SPST-NC | D2HW-BR232ML | D2HW-BL232ML | - |
| | | | SPST-NO | D2HW-BR233ML | D2HW-BL233ML | - |
| Hinge roller lever | Solder | | SPDT | D2HW-BR241H | D2HW-BL241H | D2HW-C241H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR241M | D2HW-BL241M | D2HW-C241M |
| | | | SPST-NC | D2HW-BR242M | D2HW-BL242M | D2HW-C242M |
| | | | SPST-NO | D2HW-BR243M | D2HW-BL243M | D2HW-C243M |
| | | Right-side | SPST-NC | D2HW-BR242MR | D2HW-BL242MR | D2HW-C242MR |
| | | | SPST-NO | D2HW-BR243MR | D2HW-BL243MR | D2HW-C243MR |
| | | Left-side | SPST-NC | D2HW-BR242ML | D2HW-BL242ML | - |
| | | | SPST-NO | D2HW-BR243ML | D2HW-BL243ML | - |
| Leaf lever | Solder | | SPDT | D2HW-BR261H | D2HW-BL261H | D2HW-C261H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR261M | D2HW-BL261M | D2HW-C261M |
| | | | SPST-NC | D2HW-BR262M | D2HW-BL262M | D2HW-C262M |
| | | | SPST-NO | D2HW-BR263M | D2HW-BL263M | D2HW-C263M |
| | | Right-side | SPST-NC | D2HW-BR262MR | D2HW-BL262MR | D2HW-C262MR |
| | | | SPST-NO | D2HW-BR263MR | D2HW-BL263MR | D2HW-C263MR |
| | | Left-side | SPST-NC | D2HW-BR262ML | D2HW-BL262ML | - |
| | | | SPST-NO | D2HW-BR263ML | D2HW-BL263ML | - |
| Simulated roller leaf lever | Solder | | SPDT | D2HW-BR271H | D2HW-BL271H | D2HW-C271H |
| | Molded lead wires | Downwards | SPDT | D2HW-BR271M | D2HW-BL271M | D2HW-C271M |
| | | | SPST-NC | D2HW-BR272M | D2HW-BL272M | D2HW-C272M |
| | | | SPST-NO | D2HW-BR273M | D2HW-BL273M | D2HW-C273M |
| | | Right-side | SPST-NC | D2HW-BR272MR | D2HW-BL272MR | D2HW-C272MR |
| | | | SPST-NO | D2HW-BR273MR | D2HW-BL273MR | D2HW-C273MR |
| | | Left-side | SPST-NC | D2HW-BR272ML | D2HW-BL272ML | - |
| | | | SPST-NO | D2HW-BR273ML | D2HW-BL273ML | - |
| Long leaf lever | Molded lead wires | Downwards | SPDT | D2HW-BR281M | D2HW-BL281M | D2HW-C281M |
| | | | SPST-NC | D2HW-BR282M | D2HW-BL282M | D2HW-C282M |
| | | | SPST-NO | D2HW-BR283M | D2HW-BL283M | D2HW-C283M |
| | | Right-side | SPST-NC | - | - | D2HW-C282MR |
| | | | SPST-NO | - | - | D2HW-C283MR |

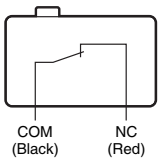
Note1. The length of standard lead wires (AVSS 0.5) for molded lead wire models shown above is 30 cm.
Note2. "S" is added to the end of the model number for the UL/CSA-approved version The lead wire models are UL approved wires (AWG24, UL1007). Consult your OMRON sales representative for details.

## Contact form

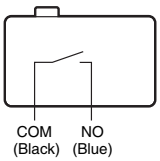
**●SPDT**




**● SPST-NC, (Molded Lead Wire Models Only)**




**● SPST-NO, (Molded Lead Wire Models Only)**




Molded lead wire colors are indicated in parentheses.



## Contact Specifications

| | | |
|---|---|---|
| Contact | Specification | Crossbar |
| | Material | Gold alloy |
| | Gap (standard value) | 0.5 mm |
| Minimum applicable load (see note) | | 5 VDC 1mA |

## Ratings

| Rated voltage | Resistive load |
|---|---|
| 125 VAC | 0.1A |
| 12 VDC<br>24 VDC<br>42 VDC | 2A<br>1A<br>0.5A |

Note. The above rating values apply under the following test conditions.
(1) Ambient temperature: 20±2°C
(2) Ambient humidity: 65±5 %
(3) Operating frequency: 30 operations/min

## Approved Safety Standard

Consult your OMRON sales representative for specific models with standard approvals.
UL (UL1054/CSA C22.2 No.55)

| Rated voltage \ Model | D2HW |
|---|---|
| Item | Resistive load |
| 125 VAC | 0.1A |
| 12 VDC | 2A |

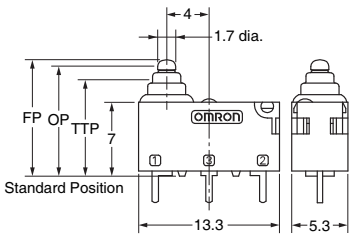
## Characteristics

| | | |
|---|---|---|
| Permissible operating speed | | 1 mm to 500 mm/s (for pin plunger models) |
| Permissible operating frequency | | 30 operations/min |
| Insulation resistance | | 100 MΩ min. (at 500 VDC with insulation tester) |
| Contact resistance (initial value) | Terminals | 100 mΩ max. |
| | Molded lead wire models | 150 mΩ max. |
| Dielectric strength | Between terminals of the same polarity | 600 VAC 50/60 Hz 1min |
| | Between current-carrying metal parts and ground | 1,500 VAC 50/60 Hz 1 min |
| | Between terminals and non-current-carrying metal parts | 1,500 VAC 50/60 Hz 1 min |
| Vibration resistance * 1 | Malfunction | 10 to 55 Hz, 1.5 mm double amplitude |
| Shock resistance | Durability | 1,000 m/s² {approx. 100G} max. |
| | Malfunction * 1 | 300 m/s² {approx. 30G} max. |
| Durability * 2 | Mechanical | 1,000,000 operations min. (30 operations/min) |
| | Electrical | 100,000 operations min. (20 operations/min) |
| Degree of protection | Terminals | IEC IP67 (excluding the terminals on terminal models) |
| | molded lead wire models | IEC IP67 |
| Ambient operating temperature | | -40 to +85°C (at ambient humidity of 60% max.) (with no icing or condensation) |
| Ambient operating humidity | | 95% max. (for +5 to +35°C) |
| Weight | | Approx. 0.7 g (for pin plunger models with terminals) |

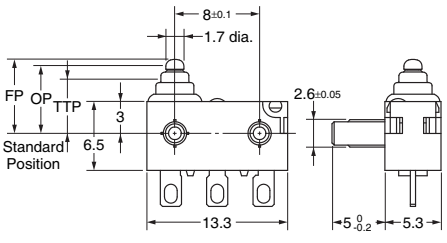
Note. The data given above are initial values.
*1. For the pin plunger models, the above values apply for use at the free position, operating position, and total travel position. For the lever models, they apply at the total travel position. Close or open circuit of the contact is 1ms max.
*2. For testing conditions, consult your OMRON sales representative.

## Mounting Structure and Reference Positions for Operating Characteristics (Unit: mm)

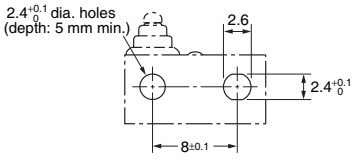
**●Without posts**
**D2HW-A□**



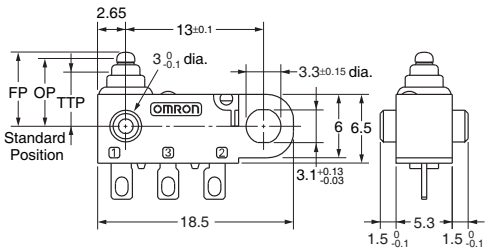

**●Models with Posts**
**D2HW-B□**



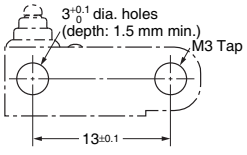

**Mounting Hole Dimensions (Reference)**




**●M3-screw Mounting Models**
**D2HW-C□**



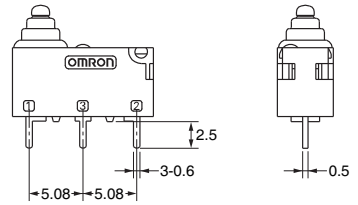

**Mounting Hole Dimensions (Reference)**



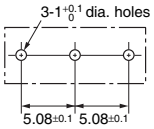

Note. The reference positions used for Free Position (FP), Operating Position (OP), and Total Travel Position (TTP) values are as shown above for each type of mounting.

## Terminals/Appearances (Unit: mm)

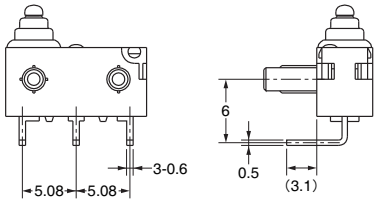
### ●PCB terminals (Straight)



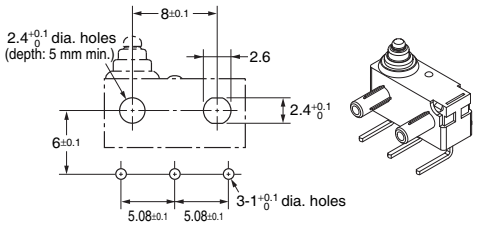

<PCB Mounting Dimensions (Reference)>



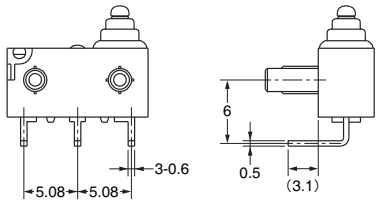

### ●PCB Terminals (Left-angled)

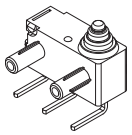



<PCB Cutout Dimensions (Reference)>

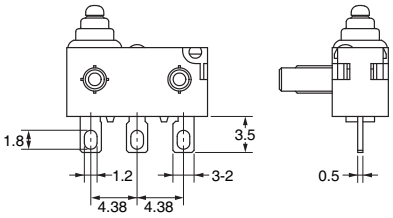



### ●PCB terminals (Right-angled)

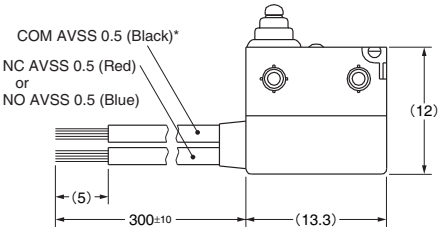


### ●Solder terminals

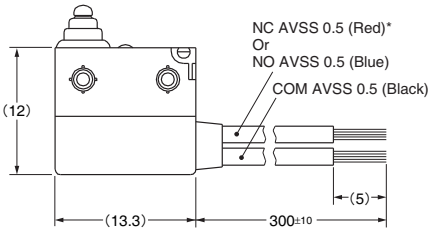



### ●Molded Lead Wires on Left-side



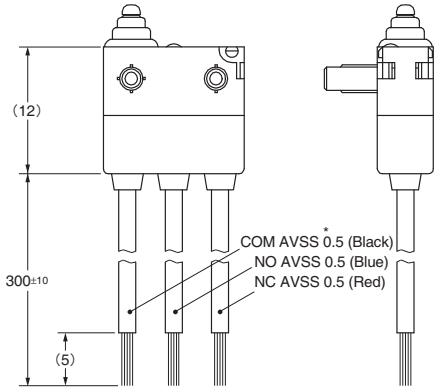

* UL approved wires (AWG24, UL1007) are used for UL/CSA standard approved items.

### ●Molded Lead Wires on Right-side




* UL approved wires (AWG24, UL1007) are used for UL/CSA standard approved items.

### ●Molded Lead Wires Downwards

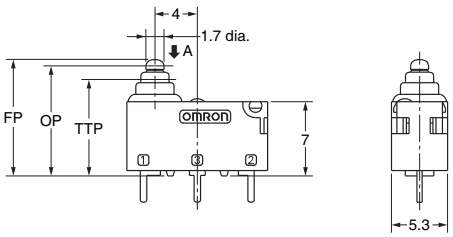



* UL approved wires (AWG24, UL1007) are used for UL/CSA standard approved items.

## Dimensions (Unit: mm) /Operating Characteristics

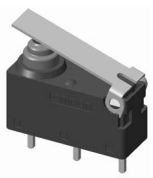
The following illustrations and drawings are representative models. When ordering, replace □ with the code for the mounting structure, contact form and terminal that you need.
See the "■**List of Models**" for available combinations of appearances.
Refer to page 3 to 4 for the mounting structures and terminal forms.

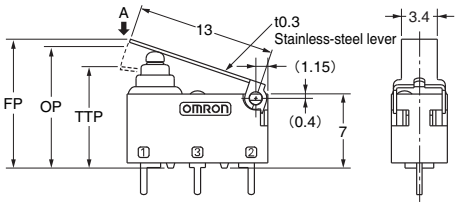
### ●Pin plunger
**D2HW-□20□□**




| Operating characteristics | | Type | Without posts | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|---|
| Operating Force | OF | Max. | 0.75N {76 gf} | | |
| Releasing Force | RF | Min. | 0.10N {10 gf} | | |
| Overtravel | OT | | 1.4 mm (reference value) | | |
| Movement Differential | MD | Max. | 0.25 mm | | |
| Free Position | FP | Max. | 11.2 mm | 7.2 mm | |
| Operating Position | OP | | 10.4±0.2 mm | 6.4±0.2 mm | |
| Total Travel Position | TTP | Max. | 9.1 mm | 5.1 mm | |

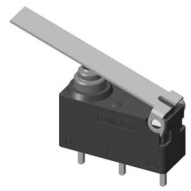
### ●Hinge Lever
**D2HW-□21□□**

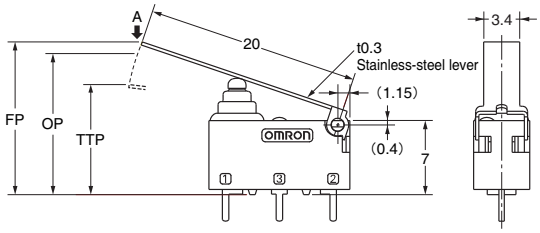





| Operating characteristics | | Type | Without posts | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|---|
| Operating Force | OF | Max. | 0.75N {76 gf} | | |
| Releasing Force | RF | Min. | 0.07N {7 gf} | | |
| Overtravel | OT | | 1.6 mm (reference value) | | |
| Movement Differential | MD | Max. | 0.5 mm | | |
| Free Position | FP | Max. | 12.8 mm | 8.8 mm | |
| Operating Position | OP | | 11.5±0.5 mm | 7.5±0.5 mm | |
| Total Travel Position | TTP | Max. | 10 mm | 6 mm | |

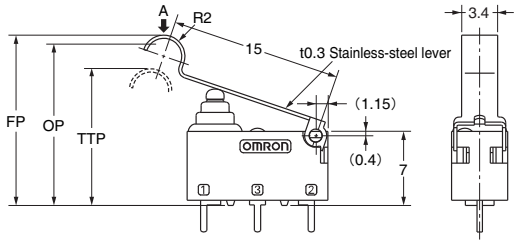
### ●Long Hinge Lever
**D2HW-□22□□**





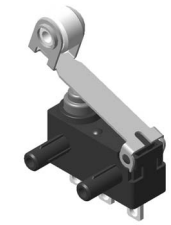

| Operating characteristics | | Type | Without posts | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|---|
| Operating Force | OF | Max. | 0.5N {50 gf} | | |
| Releasing Force | RF | Min. | 0.03N {3 gf} | | |
| Overtravel | OT | | 2.5 mm (reference value) | | |
| Movement Differential | MD | Max. | 0.8 mm | | |
| Free Position | FP | Max. | 15.5 mm | 11.5 mm | |
| Operating Position | OP | | 13.3±0.8 mm | 9.3±0.8 mm | |
| Total Travel Position | TTP | Max. | 11 mm | 7 mm | |

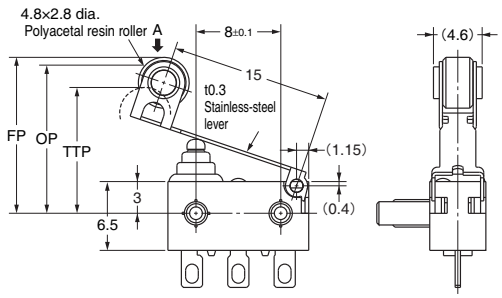
### ●Simulated Roller Lever
**D2HW-□23□□**




| Operating characteristics | | Type | Without posts | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|---|
| Operating Force | OF | Max. | 0.65N {66 gf} | | |
| Releasing Force | RF | Min. | 0.05N {5 gf} | | |
| Overtravel | OT | | 1.9 mm (reference value) | | |
| Movement Differential | MD | Max. | 0.5 mm | | |
| Free Position | FP | Max. | 16.5 mm | 12.5 mm | |
| Operating Position | OP | | 15.2±0.5 mm | 11.2±0.5 mm | |
| Total Travel Position | TTP | Max. | 13.5 mm | 9.5 mm | |

### ●Hinge Roller Lever
**D2HW-□24□□**

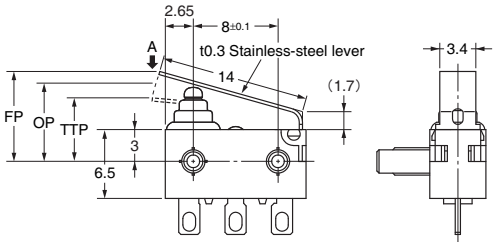





| Operating characteristics | | Type | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|
| Operating Force | OF | Max. | 0.65N {66 gf} | |
| Releasing Force | RF | Min. | 0.03N {3 gf} | |
| Overtravel | OT | | 1.9 mm (reference value) | |
| Movement Differential | MD | Max. | 0.6 mm | |
| Free Position | FP | Max. | 15.3 mm | |
| Operating Position | OP | | 14±0.6 mm | |
| Total Travel Position | TTP | Max. | 12.3 mm | |

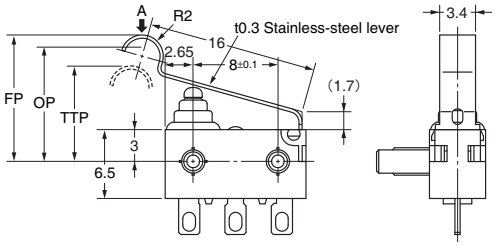
Note1. Unless otherwise specified, a tolerance of ±0.2mm applies to all dimensions.
Note2. The operating characteristics are for operation in the A direction (⬇).

## ●Leaf Lever
**D2HW-□26□□**



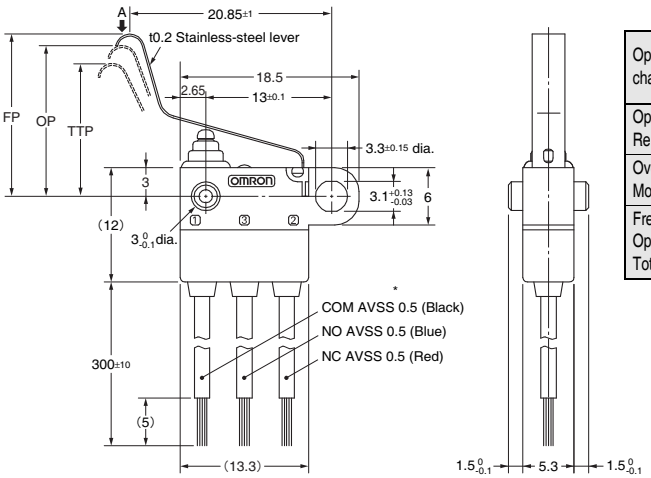

| Operating characteristics | | Type | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|
| Operating Force | OF | Max. | 1.8N {183 gf} | |
| Releasing Force | RF | Min. | 0.20N {20 gf} | |
| Overtravel | OT | | 1.8 mm (reference value) | |
| Movement Differential | MD | Max. | 0.5 mm | |
| Free Position | FP | Max. | 9.3 mm | |
| Operating Position | OP | | 7.4±0.5 mm | |
| Total Travel Position | TTP | Max. | 5.8 mm | |

## ●Simulated Roller Lever
**D2HW-□27□□**




| Operating characteristics | | Type | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|
| Operating Force | OF | Max. | 1.8N {183 gf} | |
| Releasing Force | RF | Min. | 0.20N {20 gf} | |
| Overtravel | OT | | 2.0 mm (reference value) | |
| Movement Differential | MD | Max. | 0.5 mm | |
| Free Position | FP | Max. | 13.0 mm | |
| Operating Position | OP | | 10.8±0.5 mm | |
| Total Travel Position | TTP | Max. | 8.9 mm | |

## ●Long Leaf Lever
**D2HW-□28□□**




| Operating characteristics | | Type | Models with Posts | M3-screw Mounting Models |
|---|---|---|---|---|
| Operating Force | OF | Max. | 0.9N {92 gf} | |
| Releasing Force | RF | Min. | 0.05N {5 gf} | |
| Overtravel | OT | | 2.8 mm (reference value) | |
| Movement Differential | MD | Max. | 0.7 mm | |
| Free Position | FP | Max. | 19 mm | |
| Operating Position | OP | | 15.4±1.5 mm | |
| Total Travel Position | TTP | Max. | 12.8 mm | |

* UL approved wires (AWG24, UL1007) are used for UL/CSA standard approved items.

Note1. Unless otherwise specified, a tolerance of ±0.2mm applies to all dimensions.
Note2. The operating characteristics are for operation in the A direction (⬇).

## Precautions

**★Please refer to "General Information" for correct use.**

### Cautions

**●Degree of Protection**

- Do not use this product underwater.
  Although molded lead wire models satisfy the test conditions for the standard given below, this test is to check the ingress of water into the switch enclosure after submerging the Switch in water for a given time. Satisfying this test condition does not mean that the Switch can be used underwater.
  JIS C0920:
  Degrees of protection provided by enclosures of electrical apparatus (IP Code)
  IEC 60529:
  Degrees of protection provided by enclosures (IP Code)
  Degree of protection: IP67
  (check water intrusion after immersion for 30 min. submerged 1m underwater)
- Do not operate the Switch when it is exposed to water spray, or when water drops adhere to the Switch surface, or during sudden temperature changes, otherwise water may intrude into the interior of the Switch due to a suction effect.
- Prevent the Switch from coming into contact with oil and chemicals.
  Otherwise, damage to or deterioration of Switch materials may result.
- Do not use the Switch in areas where it is exposed to silicon adhesives, oil, or grease. Otherwise faulty contact may result due to the generation of silicon oxide.

**●Soldering**

When soldering the lead wire to the terminal, first insert the lead wire conductor through the terminal hole and then conduct soldering.
Make sure that the temperature of the soldering iron tip does not exceed 300°C, and complete the soldering within 3 seconds. Do not apply any external force for 1 minute after soldering.
Soldering at an excessively high temperature or soldering for more than 3 seconds may deteriorate the characteristics of the Switch.
In case of automatic soldering, please do not apply the heat beyond 260°C within 5 seconds. Pay careful attention so that flux or solder liquid does not flow over the edge of the PCB panel.

**●Side-actuated (Cam/Dog) Operation**

- When using a cam or dog to operate the Switch, factors such as the operating speed, operating frequency, push-button indentation, and material and shape of the cam or dog will affect the durability of the Switch. Confirm performance specifications under actual operating conditions before using the Switch in applications.

### Correct Use

**●Mounting**

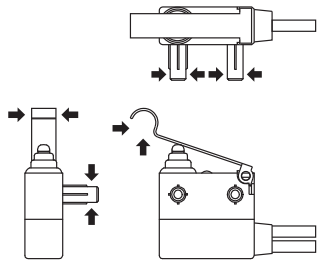
- Turn OFF the power supply before mounting or removing the Switch, wiring, or performing maintenance or inspection. Failure to do so may result in electric shock or burning.
- For M3-screw mounting models, use M3 mounting screws with plane washers or spring washers to securely mount the Switch.
  Tighten the screws to a torque of 0.27 to 0.29 N·m {27.5 to 29.5 gf}. Exceeding the specified torque may result in deterioration of the sealing or damage.
- For models with posts, secure the posts by thermal caulking or by pressing into an attached device. When pressed into an attached device, provide guides on the opposite ends of the posts to ensure that they do not fall out or rattle.
  Thermal caulking conditions varies according to the equipment, jig and base used for switch mounting. Consult your OMRON sales representative for details.

**●Operating Body**

- Use an operating body with low frictional resistance and of a shape that will not interfere with the sealing rubber, otherwise the plunger may be damaged or the sealing may deteriorate.

**●Handling**

- Do not handle the Switch in a way that may cause damage to the sealing rubber.
- When handling the Switch, ensure that pressure is not applied to the posts in the directions shown in the following diagram. Also, ensure that uneven pressure or pressure in a direction other than the operating direction is not applied to the Actuator as shown in the following diagram. Otherwise, the post, Actuator, or Switch may be damaged, or the service life may be reduced.



**●Wiring Molded Lead Wire Models**

- When wiring molded lead wire models, ensure that there is no weight applied on the wire or that there are no sharp bends near the parts where the wire is drawn out.
  Otherwise, damage to the Switch or deterioration in the sealing may result.

**●Using Micro Loads**

- Even when using micro load models within the operating range shown below, if inrush/surge current occurs, it may increase the contact wear and so decrease durability. Therefore, insert a contact protection circuit where necessary.

**OMRON Corporation**
**ELECTRONIC AND MECHANICAL COMPONENTS COMPANY** **Contact: www.omron.com/ecb**

**Cat. No. B105-E1-06**
0812(0207)(O)

# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

***Click to view similar products for*** Basic / Snap Action Switches ***category:***

***Click to view products by*** Omron ***manufacturer:***

Other Similar products are found below :

5SM901-S12 5SM9-S12N195 602EN532 602EN535-RB 602HE5-RB1 604HE162 604HE223-6B 624HE17-RB 6HM82 6HM89 6SE1 6SX1-H58 70500216 70599106 MBD5B1 MBH2731 73-316-0012 EXD-AR20 79211923 79218589 7AS12 MIL30126AB6BBMD4A12XAU ML-1155 ML-1376 831010C3.0 831090C2.EL 83131904 8AS239 8HM73-3 8SX26-H33 914CE1-6G PL-100 11SM1077-H4 11SM1077-H58 11SM1-TN107 11SM405 11SM8423-H2 11SX37-T 11SX48-H58 11SM2442-T 11SM76-T 11SM77-H58 11SM77-T 11SM863-T 11SM866 A7CN-1M-1-LEFT A831700C7.0 121EN187-R 121EN188-R 1245.0120