## 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 2345

1. Mounting Structure $\qquad$
A : Without posts (base-mounting)
2. Contact form

BR : Post on right
1 : SPDT
2 : SPST-NC (Molded lead wire models only)
BL : Post on left
3 : SPST-NO (Molded lead wire models only)
C : M3-screw mounting models
2. Raitings

2 : 5 VDC 1 mA to 12 VDC 2 A
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

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

OPCB－mounted Models

| Actuator | Terminals |  | List of Models Contact form | With posts on right | With posts on left | Without posts |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pin plunger | For PCB | Straight | SPDT | － | － | D2HW－A201D |
| Pin plunger |  | 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 $\sim$ |  | Straight |  | － | － | D2HW－A231D |
| hinge lever م |  | 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 |  | List of Models Contact form | 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 1 mA |

## Ratings

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

Note. The above rating values apply under the following test conditions.
(1) Ambient temperature: $20 \pm 2^{\circ} \mathrm{C}$
(2) Ambient humidity: $65 \pm 5 \%$
(3) Operating frequency: 30 operations $/ \mathrm{min}$

## Approved Safety Standard

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

| Rated voltage | Model <br> Item | D2HW |
| :---: | ---: | :---: |
|  | Resistive load |  |
| 125 VAC | 0.1 A |  |
| 12 VDC | 2 A |  |

Characteristics $\quad 2$
2
Characteristics

| Permissible operating speed |  | 1 mm to $500 \mathrm{~mm} / \mathrm{s}$ (for pin plunger models) |
| :---: | :---: | :---: |
| Permissible operating frequency |  | 30 operations/min |
| Insulation resistance |  | $100 \mathrm{M} \Omega$ min. (at 500 VDC with insulation tester) |
| Contact <br> resistance <br> (initial value) | Terminals | $100 \mathrm{~m} \Omega$ max. |
|  | Molded lead wire models | $150 \mathrm{~m} \Omega$ max. |
| Dielectric strength | Between terminals of the same polarity | 600 VAC $50 / 60 \mathrm{~Hz} 1$ min |
|  | Between current-carrying metal parts and ground | 1,500 VAC $50 / 60 \mathrm{~Hz} 1 \mathrm{~min}$ |
|  | Between terminals and non-current-carrying metal parts | 1,500 VAC 50/60 Hz 1 min |
| Vibration resistance *1 | Malfunction | 10 to $55 \mathrm{~Hz}, 1.5 \mathrm{~mm}$ double amplitude |
| Shock resistance | Durability | 1,000 m/s² \{approx. 100G\} max. |
|  | Malfunction * 1 | $300 \mathrm{~m} / \mathrm{s}^{2}$ \{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 $+85^{\circ} \mathrm{C}$ (at ambient humidity of $60 \%$ max.) (with no icing or condensation) |
| Ambient operating humidity |  | $95 \%$ max. (for +5 to $+35^{\circ} \mathrm{C}$ ) |
| 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 1 ms max.
*2. For testing conditions, consult your OMRON sales representative.

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



[^0]
## Terminals/Appearances (Unit: mm)


-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 $\square$ 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.

## OPin plunger

## D2HW- $\square 20 \square \square$



| Operating characteristics |  | Type | Without <br> posts | Models with <br> Posts | M3-screw <br> Mounting <br> Models |
| :--- | :--- | :--- | :---: | :---: | :---: |
| Operating Force | OF | Max. | $0.75 \mathrm{~N}\{76 \mathrm{gf}\}$ |  |  |
| Releasing Force | RF | Min. | $0.10 \mathrm{~N}\{10 \mathrm{gf}\}$ |  |  |
| 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 |  | $10.4 \pm 0.2 \mathrm{~mm}$ | $6.4 \pm 0.2 \mathrm{~mm}$ |  |
| Total Travel Position | TTP | Max. | 9.1 mm | 5.1 mm |  |

-Hinge Lever
D2HW- $\square 21 \square \square$


| Operating characteristics |  | Type | Without posts | Models with Posts | M3-screw Mounting Models |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Operating Force <br> Releasing Force | $\begin{aligned} & \hline \mathrm{OF} \\ & \mathrm{RF} \end{aligned}$ | Max. <br> Min. | $\begin{gathered} 0.75 \mathrm{~N}\{76 \mathrm{gf}\} \\ 0.07 \mathrm{~N}\{7 \mathrm{gf}\} \end{gathered}$ |  |  |
| Overtravel <br> Movement Differential | $\begin{aligned} & \text { OT } \\ & \text { MD } \end{aligned}$ | Max. | $\begin{gathered} 1.6 \mathrm{~mm} \text { (reference value) } \\ 0.5 \mathrm{~mm} \\ \hline \end{gathered}$ |  |  |
| Free Position Operating Position Total Travel Position | $\begin{aligned} & \text { FP } \\ & \text { OP } \\ & \text { TTP } \end{aligned}$ | Max. Max. | $\begin{array}{\|c\|} \hline 12.8 \mathrm{~mm} \\ 11.5 \pm 0.5 \mathrm{~mm} \\ 10 \mathrm{~mm} \end{array}$ | $\begin{gathered} 8.8 \mathrm{~mm} \\ 7.5 \pm 0.5 \mathrm{~mm} \\ 6 \mathrm{~mm} \end{gathered}$ |  |

©Long Hinge Lever
D2HW- $\square 22 \square \square$


| Operating characteristics |  | Type | Without posts | Models with Posts | M3-screw Mounting Models |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Operating Force Releasing Force | $\begin{aligned} & \hline \mathrm{OF} \\ & \mathrm{RF} \end{aligned}$ | Max. <br> Min. | $\begin{aligned} & 0.5 \mathrm{~N}\{50 \mathrm{gf}\} \\ & 0.03 \mathrm{~N}\{3 \mathrm{af}\} \end{aligned}$ |  |  |
| Overtravel Movement Differential | $\begin{aligned} & \text { OT } \\ & \text { MD } \end{aligned}$ | Max. | 2.5 mm (reference value) 0.8 mm |  |  |
| Free Position Operating Position Total Travel Position | $\begin{aligned} & \hline F P \\ & O P \\ & T T P \end{aligned}$ | Max. | $\begin{gathered} 15.5 \mathrm{~mm} \\ 13.3 \pm 0.8 \mathrm{~mm} \\ 11 \mathrm{~mm} \end{gathered}$ | $\begin{gathered} 11.5 \mathrm{~mm} \\ 9.3 \pm 0.8 \mathrm{~mm} \\ 7 \mathrm{~mm} \end{gathered}$ |  |

## -Simulated Roller Lever

D2HW- $\square$ 23 $\square \square$


| Operating characteristics |  | Type | Without posts | Models with Posts | M3-screw Mounting Models |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Operating Force Releasing Force | $\begin{aligned} & \hline \mathrm{OF} \\ & \mathrm{RF} \end{aligned}$ | $\begin{aligned} & \hline \text { Max. } \\ & \text { Min } \end{aligned}$ | $\begin{gathered} 0.65 \mathrm{~N}\{66 \mathrm{gf}\} \\ 0.05 \mathrm{~N}\{5 \mathrm{gf}\} \end{gathered}$ |  |  |
| Overtravel <br> Movement Differential |  | Max. | 1.9 mm (reference value) 0.5 mm |  |  |
| Free Position Operating Position Total Travel Position | $\begin{aligned} & \text { FP } \\ & \text { OP } \\ & \text { TTP } \end{aligned}$ | Max. Max. | $\begin{gathered} 16.5 \mathrm{~mm} \\ 15.2 \pm 0.5 \mathrm{~mm} \\ 13.5 \mathrm{~mm} \end{gathered}$ | $\begin{gathered} 12.5 \mathrm{~mm} \\ 11.2 \pm 0.5 \mathrm{~mm} \\ 9.5 \mathrm{~mm} \end{gathered}$ |  |

-Hinge Roller Lever
D2HW- $\square$ 24 $\square \square$


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

Note1. Unless otherwise specified, a tolerance of $\pm 0.2 \mathrm{~mm}$ applies to all dimensions.
Note2. The operating characteristics are for operation in the A direction ( ).

## -Leaf Lever

D2HW- $\square$ 26 $\square \square$


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

-Simulated Roller Lever

## D2HW- $\square 27 \square \square$



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

## OLong Leaf Lever

D2HW- $\square \mathbf{2 8} \square$


Note1. Unless otherwise specified, a tolerance of $\pm 0.2 \mathrm{~mm}$ applies to all dimensions.
Note2. The operating characteristics are for operation in the A direction ( $\downarrow$ ).

## Precautions

$\star$ 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 1 m 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 $300^{\circ} \mathrm{C}$, 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 $260^{\circ} \mathrm{C}$ 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 <br> -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 $0.29 \mathrm{~N} \cdot \mathrm{~m}\{27.5$ to
$29.5 \mathrm{gf}\}$. 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.


## $\bullet$ 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.

[^1]- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

Note: Do not use this document to operate the Unit.

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[^0]:    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.

[^1]:    - Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.

