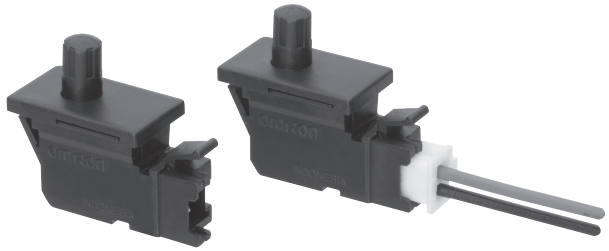
Miniature Door Switch
D3DC

Long Stroke Actuator with Operating Position Marks

- Long stroke (7 mm) in a small package.
- Easy assembly with panel mount design.
- Quick-connection terminals facilitate wiring.
- Simple leaf switch structure
- RoHS Compliant.



NEW

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Ordering Information

List of Models

Contact Form	Model Name
SPST-NC	**D3DC-2**
SPST-NO	**D3DC-3**

Model Number Legend

D3DC - □
1

1. **Contact Form**
   2: SPST-NC
   3: SPST-NO

Specifications

■ Characteristics

Operating speed	0.5 to 1 mm/s
Operating frequency	Mechanical: 30 operations/minute, max. Electrical: 20 operations/minute, max.
Insulation resistance	100 MΩ min. (at 500 VDC)
Contact resistance	300 mΩ max.
Dielectric strength	600 VAC. 50/60 Hz for 1 min between terminals of the same polarity 1,500 VAC, 50/60 Hz for 1 min between current-carrying metal parts and ground
Vibration resistance (See note 2)	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance (See note 2)	Destruction: 500 m/s^2 max. Malfunction: 100 m/s^2 max.
Degree of protection	IEC IP00
Proof tracking index (PTI)	600
Ambient operating temperature	-25°C to 85°C (at 60% RH max.) with no icing
Ambient operating humidity	85% max. (for 5°C to 35°C)
Life expectancy	Mechanical: 100,000 operations min. (30 operations per minute) Electrical: 100,000 operations min. (20 operations per minute)
Weight	Approx. 2 g

Note: 1. Data shown are of initial value.
2. The contacts do not open or close for more than 1 ms.

■ Ratings

Rated voltage	Resistive load
30 VDC	0.1 A

Note: The electrical rating applies under the following test conditions:
Ambient Temperature = 20±2°C, Ambient Humidity = 65±5%, Operating frequency = 20 operations/min.

■ Contact Specifications

Item	Specification
Specification	Rivet
Material	Silver
Gap (standard value_	0.3 mm
Minimum applicable load (see note)	1 mA at 5 VDC

Note: Minimum applicable loads are indicated by N standard reference values. This value represents the failure rate at a 60% (λ_{60}) reliability level (JIS C5003).
The equation $\lambda_{60}=0.5 \times 10^{-6}$ / operations indicates that a failure rate of 1/2,000,000 operations can be expected at a reliability level of 60%

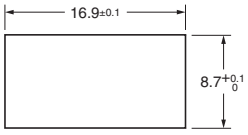
■ Approved Standards

UL Recognized
CSA Certified (UL approval)

Rated voltage	Rated Load
30 VDC	0.1 A

Engineering Data

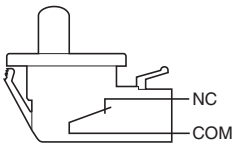
■ Panel Cutout Dimensions



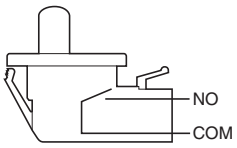
Note: Mounting plate thickness: 0.75 mm to 1.50 mm.

■ Contact Form

SPST-NC



SPST-NO

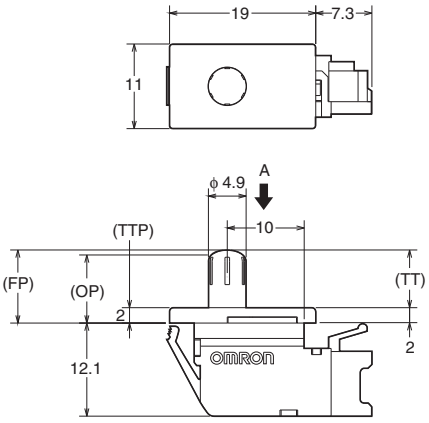


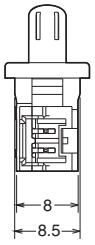
Dimensions and Operating Characteristics

Note: 1. Unless otherwise specified, all units are in millimeters and a tolerance of ±0.4 mm applies to all dimensions
2. The operating characteristics are for operation in the A direction (indicated by the arrow))

D3DC-2
D3DC-3







Model	D3DC-2	D3DC-3
OF max.	102 gf	
TT	7.0 mm (reference value)	
FP	9.5 (reference value)	
OP min.	6.7 mm	
TTP	2.0 mm (reference value)	

Precautions

Be sure to read the precautions and information common to all Snap Action and Detection Switches, contained in the Technical User's Guide, "Snap Action Switches, Technical Information" for correct use.

■ Correct Use

Mounting

This product does not have waterproof or drip-proof construction. Ensure that water does not enter the switch interior. In particular, do not use the switch in locations where water may be spilled or flow over the switch. Doing so may result in deterioration of the insulation.

Wiring

Do not use the switch with a large force applied to the connector or lead wire. Doing so may result in rattling or contact failure.

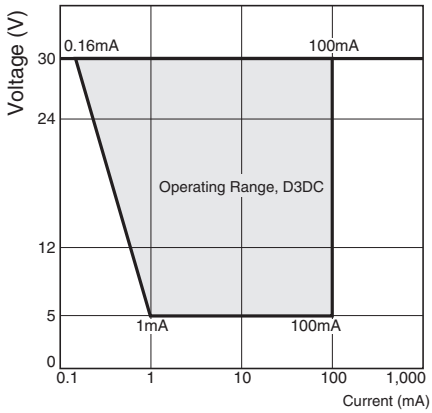
Storage Environment

Storing the switch in a plastic bag will help prevent discoloration due to sulfuration of the (silver-plated) terminals.

Do not use the switch in locations subject to harmful gases or to high temperatures or humidity levels. Depending on the location, it is recommended that switches be inspected between 3 and 6 months after the date of manufacture.

Micro Loads

Using a model for ordinary loads to switch microloads may result in faulty operation. Instead, use the models that are designed for microloads and that operate in the following range;



However, even when using microload models within the operating range shown above, if inrush current or inductive voltage spikes occur when the contact is opened or closed, then contact wear may increase and so decrease the service life. Therefore, insert a contact protection circuit where necessary.

Connectors

The terminals connect to JST's XA Connector.

The XA Connector consists of the following components.
Contact: SXA-001T-P0.6
Housing: XAP-02V-1

Omron does not sell the XA Connector.
Contact J.S.T. Manufacturing Co. for these connectors.

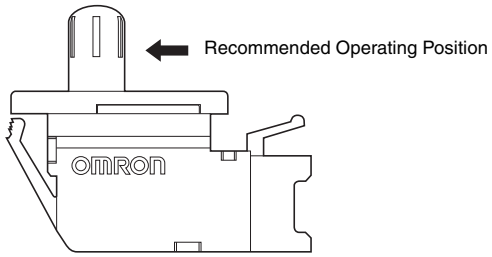
■ Cautions

Handling

Do not expose the switch to shocks, such as by dropping it. Doing so may damage or deform the switch.

Do not apply lubrication to the sliding parts, such as pushbuttons or actuators. Doing so may result in faulty operation or contact failure.

In order to ensure stable contact force for contacts, actuate beyond the recommended operating point and release to free position.



MEMO

Omron Electronic Components, LLC

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   (b) Seller: Omron Electronic Components LLC and its subsidiaries
   (c) Buyer: The buyer of Products, including any end user in section III through VI
   (d) Products: Products and/or services of Seller
   (e) Including: Including without limitation
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10. Force Majeure: Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
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    (b) Delivery and shipping dates are estimates only; and
    (c) Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
12. Claims: Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

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   (b) Use in consumer Products or any use in significant quantities.
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   (d) Systems, machines, and equipment that could present a risk to life or property.
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   (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
   (iii) Use in consumer products or any use in significant quantities.
   (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

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