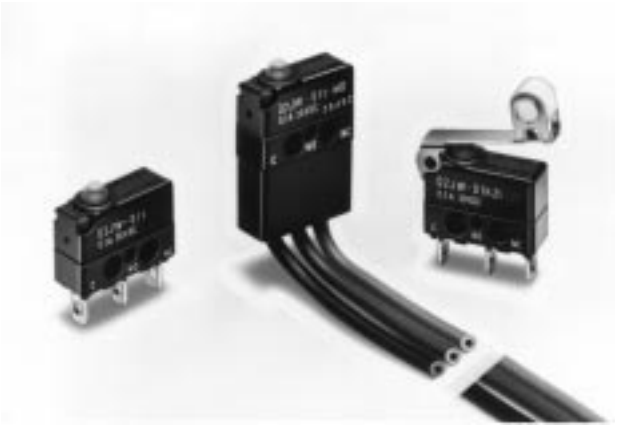
OMRON

Watertight Subminiature Basic Switch

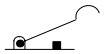
D2JW

Ultra-small and Highly Sealed

- Water-tight housing (reference to IP67).
- Wide range of operating temperature from –40°C to 85°C.
- Gold crossbar contact and coil spring offer long life expectancy and high contact reliability.



Ordering Information

Actuator	Model	
	Solder 	Molded lead wire 
Pin plunger 	D2JW-011	D2JW-011-MD
Hinge lever 	D2JW-01K1A1	D2JW-01K1A1-MD
Hinge lever 	D2JW-01K11	D2JW-01K11-MD
Simulated hinge lever 	D2JW-01K31	D2JW-01K31-MD
Hinge roller lever 	D2JW-01K21	D2JW-01K21-MD

Note: The standard lengths of the lead wires (AV0.3f) of models incorporating them are 30 cm.

Specifications

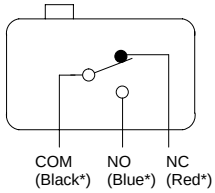
■ Ratings/Characteristics

Operating speed	1 mm to 250 mm/s (at pin plunger)
Operating frequency	Mechanical: 240 operations/min Electrical: 60 operations/min
Insulation resistance	100 MΩ min. (at 500 VDC)
Contact resistance	100 mΩ max. (molded lead models: 140 mΩ min.)
Dielectric strength	600 VAC, 50/60 Hz for 1 min between contacts of the same polarity 1,000 VAC, 50/60 Hz for 1 min between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal part
Electrical ratings	0.1 A at 30 VDC (resistive load)
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction: 200 m/s^2 (approx. 20G) Destruction: 1,000 m/s^2 (approx. 100G)
Life expectancy	Mechanical: 1,000,000 operations min. Electrical: 100,000 operations min.
Ambient temperature	Operating: –40°C to 85°C (with no icing)
Ambient humidity	Operating: 35% to 98% max.
Enclosure rating	IEC IP67
Weight	Approx. 7 g (molded leaf models, pin plunger model)

■ Operating Characteristics

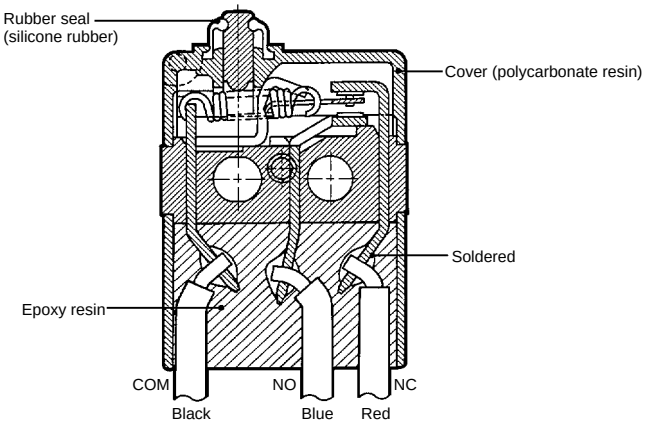
Model	Pin plunger	Short hinge lever	Hinge lever	Simulated hinge lever	Hinge roller lever
	D2JW-011	**D2JW-01K1A1**	**D2JW-01K11**	**D2JW-01K31**	**D2JW-01K21**
OF max.	2.45 N (250 gf)	1.15 N (117 gf)	0.80 N (82 gf)	0.95 N (97 gf)	0.98 N (100 gf)
RF min.	0.98 N (100 gf)	0.22 N (23 gf)	0.15 N (16 gf)	0.18 N (19 gf)	0.19 N (20 gf)
PT max.	0.6 mm	5.4 mm	6.4 mm	5.5 mm	5.2 mm
OT min.	0.3 mm	0.7 mm	1.4 mm	1.1 mm	1.1 mm
MD max.	0.1 mm	0.5 mm	0.7 mm	0.6 mm	0.5 mm
OP	8.1±0.3 mm	8.4±0.8 mm	8.4±0.8 mm	10.3±0.8 mm	14.6±0.8 mm

Contact Form



*Indicates the color of the lead wire.

Nomenclature

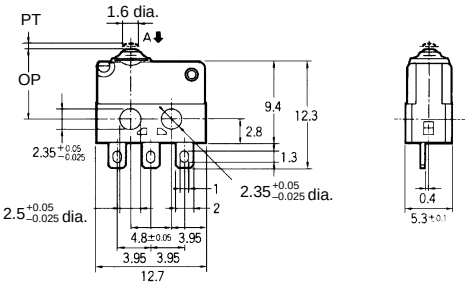


Dimensions

Note: 1. All units are in millimeters unless otherwise indicated.
2. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

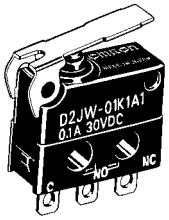
Pin Plunger

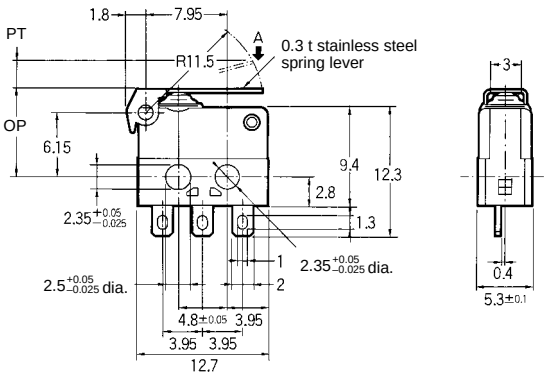
D2JW-011



Short Hinge Lever

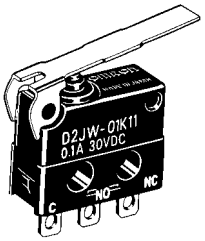
D2JW-01K1A1

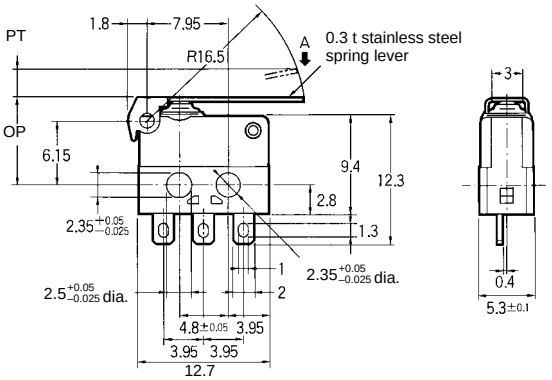




Hinge Lever

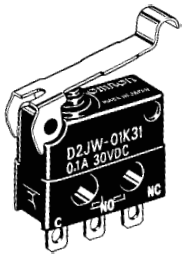
D2JW-01K11

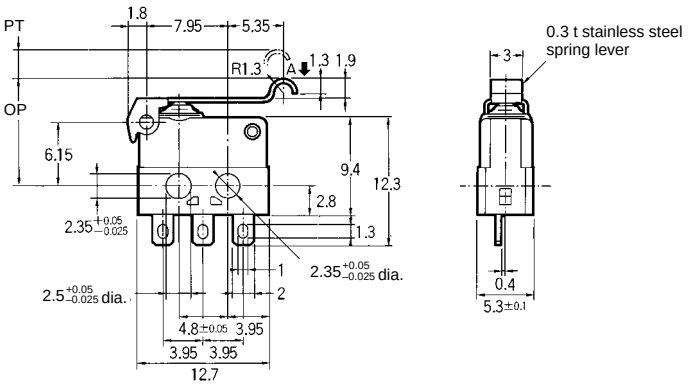




Simulated Hinge Lever

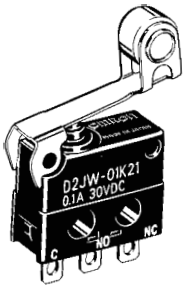
D2JW-01K31

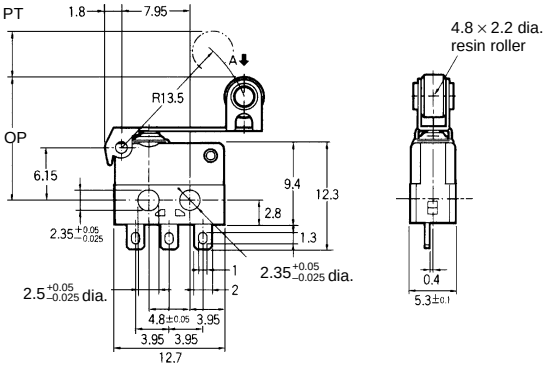




Hinge Roller Lever

D2JW-01K21

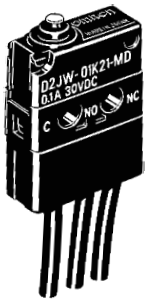


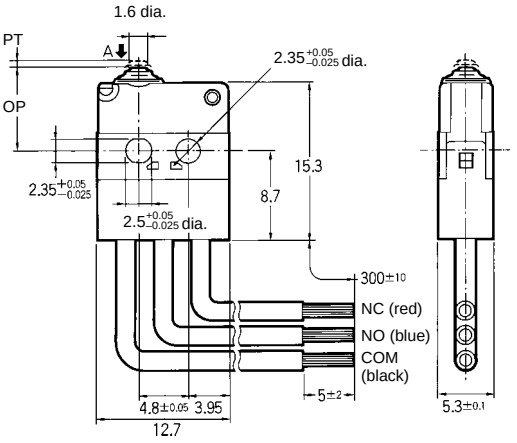


Molded Lead Wire

D2JW-01□□□-MD

Note: Alphabets and numbers are inserted in □ by the actuator.



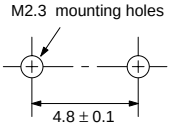


Precautions

Mounting

Use M2.3 mounting screws with plain or spring washers to mount the switch. Tighten the screws to a torque of 0.20 to 0.29 N • m (2 to 3 kg • cm).

Mounting Holes



Because the switch uses polycarbonate resin as material for its component parts, contact OMRON if the switch material is likely to deteriorate due to adherence of oil or chemicals to the switch housing.

Soldering

To solder the lead to the terminal, apply a soldering iron rated at 30 W max. (temperature of soldering iron: 280°C max.) within 3 seconds.

Applying a soldering iron for too long a time or using one that is rated at more than 30 W may degrade the switch characteristics.

Operation

Make sure that the operating body pushes the switch actuator with an adequate force when the switch is to be operated, and that it does not touch the actuator when the switch is released.

Install the pin plunger switch so that the operating force is applied in alignment with the stroke of actuator.

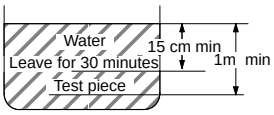
Do not apply a shock to the actuator; otherwise, the switch may be damaged.

Do not apply excessive force to the actuator of the lever switch in the operating, releasing and horizontal directions.

Enclosure Ratings

The D2JW satisfies the following test condition specified by the IEC Publication 529:

Enclosure rating: IP67
Test method: See the figure below.



Note: Temperature difference between the test piece and water must be 5°C or more.

Leave the test piece in water for 30 min with the top of the test piece submerged 15 cm or more below the water level and the bottom of the test piece submerged 1 m or more below the water level.

This test is to check the ingress of water into the switch enclosure after submerging the switch in water for a given time. Even if this test condition is met, the switch cannot be used in water.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. B40-E1-1A