

D2JW



Sealed Ultrasubminiature Basic Switch

- Ultra-small and highly sealed
- Water-tight housing conforming to IP67
- Gold crossbar contact and coil spring offer long life expectancy and high reliability
- Wide range of operating temperature from -40 C to 85 C
- ROHS Compliant

Part	Rated Resistive Load - Switch	Actuator types	Contact form	Operating Force	Seal type	Termination Style	Service Life - Electrical (Min. @ Rated Loads)
D2JW-011	0.1A @ 30VDC	Pin plunger	SPDT	250g	IP67	Solder	100,000 ops
D2JW-011-MD	0.1A @ 30VDC	Pin plunger	SPDT	250g	IP67	Lead Wires - Bottom exit	100,000 ops
D2JW-01K11	0.1A @ 30VDC	Hinge lever	SPDT	82g	IP67	Solder	100,000 ops
D2JW-01K11-MD	0.1A @ 30VDC	Hinge lever	SPDT	82g	IP67	Lead Wires - Bottom exit	100,000 ops
D2JW-01K1A1	0.1A @ 30VDC	Short hinge lever	SPDT	117g	IP67	Solder	100,000 ops
D2JW-01K1A1-MD	0.1A @ 30VDC	Short hinge lever	SPDT	117g	IP67	Lead Wires - Bottom exit	100,000 ops
D2JW-01K21	0.1A @ 30VDC	Hinge roller lever	SPDT	100g	IP67	Solder	100,000 ops
D2JW-01K21-MD	0.1A @ 30VDC	Hinge roller lever	SPDT	100g	IP67	Lead Wires - Bottom exit	100,000 ops
D2JW-01K31	0.1A @ 30VDC	Simulated roller lever	SPDT	97g	IP67	Solder	100,000 ops
D2JW-01K31-MD	0.1A @ 30VDC	Simulated roller lever	SPDT	97g	IP67	Lead Wires - Bottom exit	100,000 ops

Snap Action Switch

D2JW

Immersion-Proof Subminiature Snap Action Switch

- Ultra-small and highly sealed
- Water-tight housing conforming to IP67 (lead wire types) and IP50 (terminal types)
- Wide range of operating temperature from -40° to 85°C
- Gold crossbar contact and coil spring offer long life expectancy and high reliability
- RoHS Compliant



Ordering Information

		Model	
		Solder terminal 	Molded lead wire terminal 
Actuator			
Pin plunger 		D2JW-011	D2JW-011-MD
Short hinge lever 		D2JW-01K1A1	D2JW-01K1A1-MD
Hinge lever 		D2JW-01K11	D2JW-01K11-MD
Simulated roller lever 		D2JW-01K31	D2JW-01K31-MD
Hinge roller lever 		D2JW-001K21	D2JW-01K21-MD

Note: The length of the standard molded lead wire (AWG18) is 30 cm (12 in).

Specifications

■ Characteristics

Operating speed (see note 1)		1 mm to 250 mm/second (0.04 to 9.84 in/second)
Operating frequency (see note 1)	Mechanical	240 operations per minute
	Electrical	60 operations per minute
Contact resistance		100 mΩ max. (Molded lead type: 140 mΩ min.)
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		600 VAC, 50/60 Hz for 1 minute between terminals of same polarity 1,000 VAC, 50/60 Hz for 1 minute between current-carrying metal part and ground, and between each terminal and noncurrent-carrying metal part
Vibration	Malfunction durability	10 to 55 Hz, 1.5 mm double amplitude
Shock	Mechanical durability	1,000 m/s ² min. (approx. 100 g min.)
	Malfunction durability	200 m/s ² min. (approx. 20 g min.)
Ambient temperature		-40° to 85° C (with no icing)
Humidity		35% to 98% RH
Degree of protection		IEC IP67 IEC (lead wire type) and IP50 (terminal type)
Service life	Mechanical	1,000,000 operations min.
	Electrical	100,000 operations min.
Weight		Approx. 7 g (molded lead terminal type, pin plunger type)

Note: 1. The values are for pin plunger type.

2. Data shown are of initial value.

■ Operating Characteristics

Characteristics	Part number				
	D2JW-011	D2JW-01K1A1	D2JW-01K11	D2JW-01K31	D2JW-01K21
OF max.	250 g	117 g	82 g	97 g	100 g
RF min.	100 g	23 g	16 g	20 g	20 g
PT max.	0.6 mm (0.02 in)	5.4 mm (0.21 in)	6.4 mm (0.25 in)	5.5 mm (0.22 in)	5.2 mm (0.20 in)
OT min.	0.3 mm (0.01 in)	0.7 mm (0.03 in)	1.4 mm (0.06 in)	1.1 mm (0.04 in)	1.1 mm (0.04 in)
MD max.	0.1 mm (0.004 in)	0.5 mm (0.02 in)	0.7 mm (0.03 in)	0.6 mm (0.02 in)	0.5 mm (0.02 in)
OP	8.1±0.3 mm (0.32±0.01 in)	8.4±0.8 mm (0.33±0.03 in)	8.4±0.8 mm (0.33±0.03 in)	10.3±0.8 mm (0.41±0.03 in)	14.6±0.8 mm (0.57±0.03 in)

■ Ratings

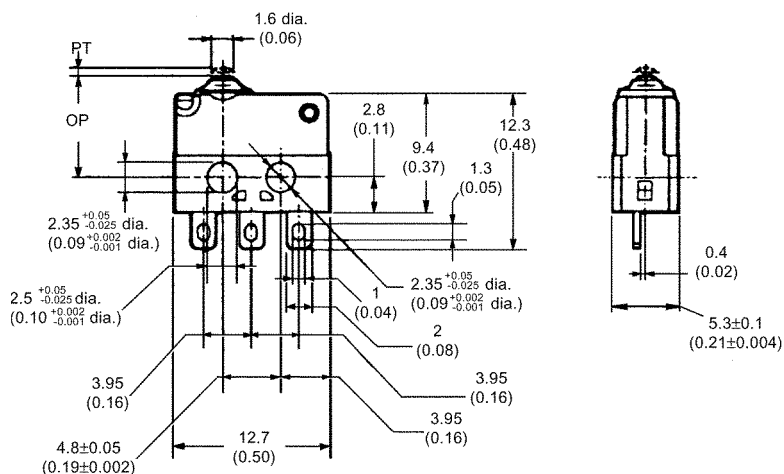
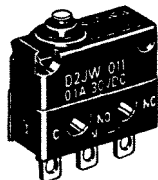
Electrical rating	0.1 A, 30 VDC (resistive load)
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Dimensions

Unit: mm (inch)

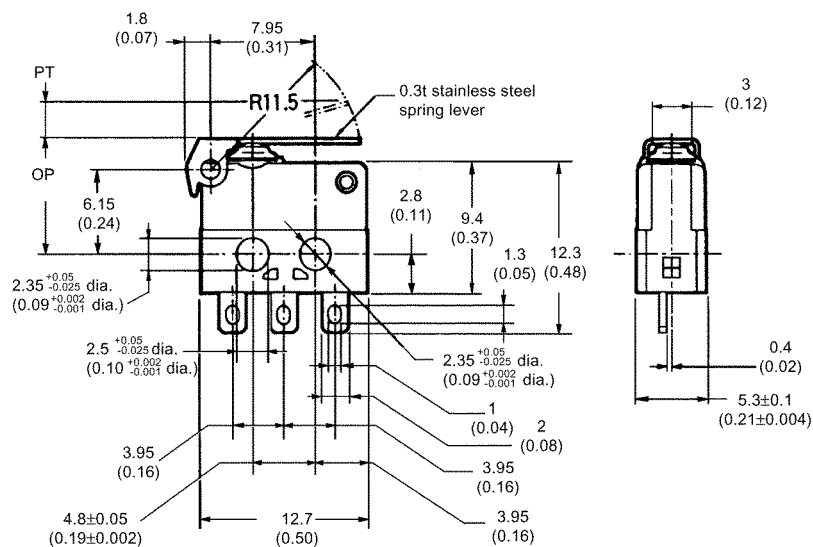
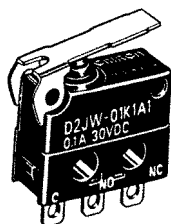
■ Pin plunger

D2JW-011



■ Short hinge lever

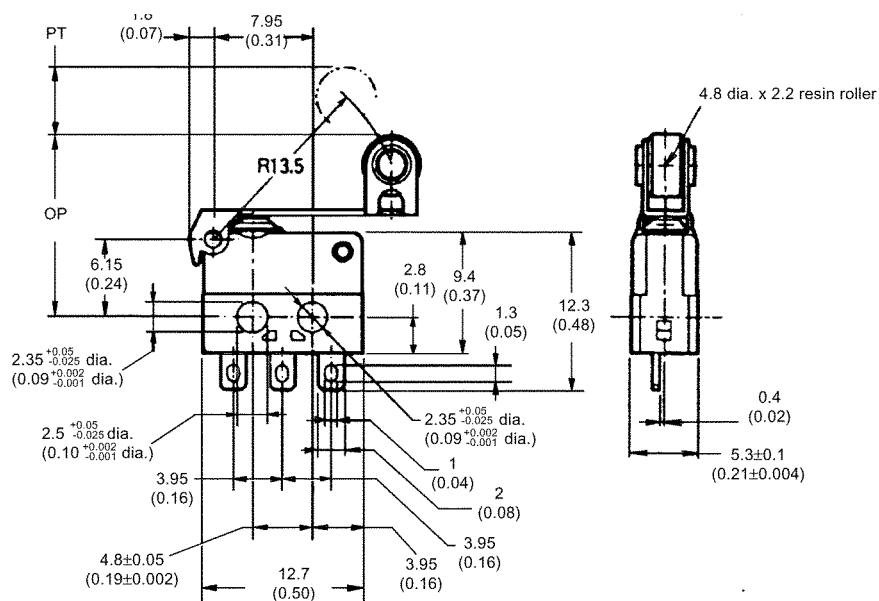
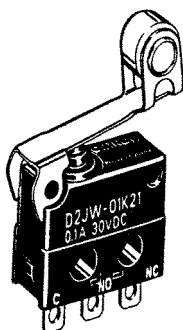
D2JW-01K1A1



Note: Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.

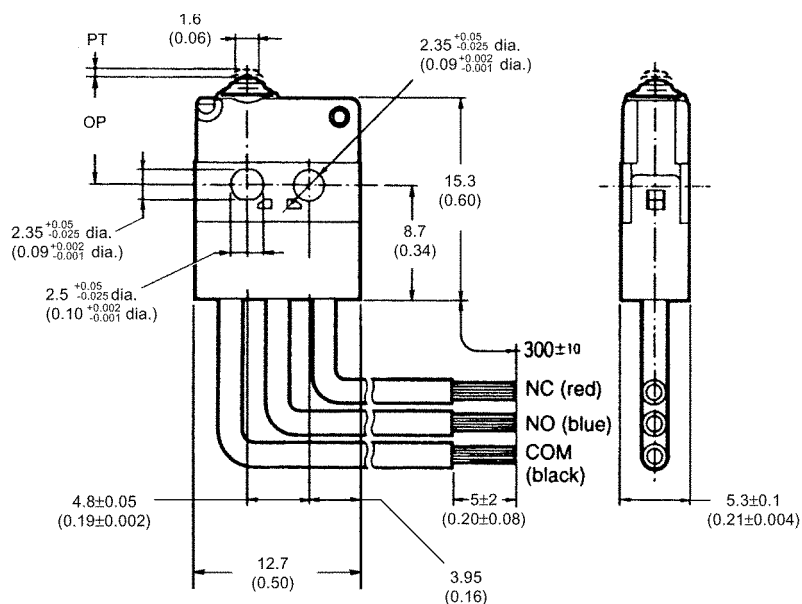
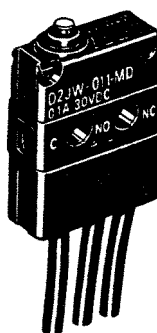
■ Hinge roller lever

D2JW-01K21



■ Molded lead wire

D2JW-01 **-MD**

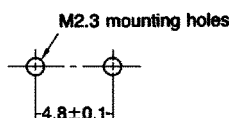


- Note:** 1. Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.
2. Letters and numbers are inserted in blank boxes according to the type actuator.

Precautions

■ Mounting

Use M2.3 screws in combination with plane washers or spring washers to securely mount the switch. Tighten the screws at a torque of 2 to 3 kg-cm.



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 three seconds).

Note that applying a soldering iron too long 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 the actuator.

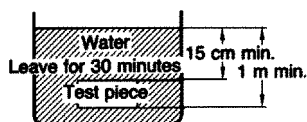
Do not apply excessive force to the actuator; otherwise, the switch may be damaged.

■ Degree of Protection

The D2JW satisfies the following test condition specified by the IEC Publication 529 (Degree of Protection by Enclosure):

Degree of protection: IP67

Test method: See the figure below.



Leave the test piece in water for 30 minutes 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. Note that even if this test condition is met, the switch cannot be used in water.