

# Detection Switch

## D3C

### Subminiature Detection Switch

- Built-in slide mechanism selects shorting or non-shortening switch timing
- 3 mm (0.12 in) long stroke
- PCB mount switch with 100 milliamp capacity
- Ideal for household appliances, sound equipment, office equipment, communications equipment, etc.
- Compact size
- RoHS Compliant



## Ordering Information

Actuator	Model			
	General Purpose		Low Operating Force	
	Non-shortening Model	Shorting Model	Non-shortening Model	Shorting Model
Hinge lever	D3C-1210	D3C-2210	D3C-1220	D3C-2220

## Specifications

### ■ Characteristics

Electrical rating		0.1 A, 30 VDC (resistive load)
Operating speed		1 to 500 mm/second (0.04 to 19.7 in/second)
Operating frequency	Mechanical	200 operations per minute
	Electrical	30 operations per minute
Contact resistance		50 mΩ max.
Insulation resistance		100 MΩ min. at 250 VDC
Dielectric strength		250 VAC, 50/60 Hz for 1 minute between contacts of same polarity 250 VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	Malfunction durability	10 to 55 Hz, 1.5 mm double amplitude
Shock	Malfunction durability	300 m/s <sup>2</sup> minimum (approx. 30 g minimum)
Ambient temperature	Operating	-20° to 80° C with no icing
Humidity	Operating	65% max. at 5° to 35°C
Service life		50,000 operations minimum at the rated switch frequency
Weight		Approx. 0.3 g

**Note:** Data shown are of initial value.

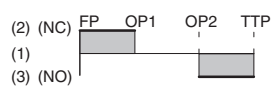
## ■ Operating Characteristics

Characteristics	Non-shorting Model		Shorting Model	
	D3C-1210	D3C-1220	D3C-2210	D3C-2220
OF max.	130 g	40 g	130 g	40 g
RF min.	10 g	3 g	10 g	3 g
OP1	3.5 ± 0.3 mm (0.14 ± 0.01 in)		3.4 ± 0.3 mm (0.13 ± 0.01 in)	
OP2	2.5 ± 0.3 mm (0.10 ± 0.01 in)		2.6 ± 0.3 mm (0.10 ± 0.01 in)	
TTP	1.3 ± 0.4 mm (0.05 ± 0.02 in)		1.3 ± 0.4 mm (0.05 ± 0.02 in)	
FP max.	4.8 mm (0.19 in)		4.8 mm (0.19 in)	

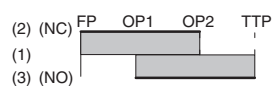
## ■ Switching Timing

### Non-shorting Model

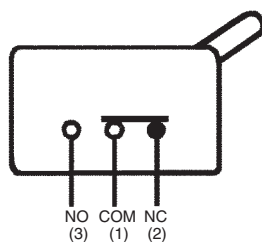
#### Non-shorting Model



#### Shorting Model



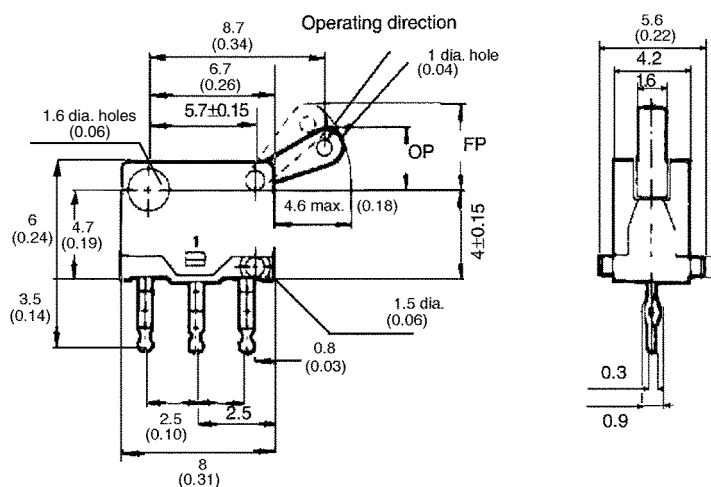
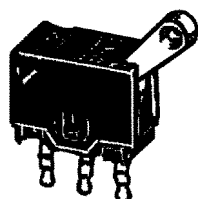
## ■ Contact Form



## Dimensions

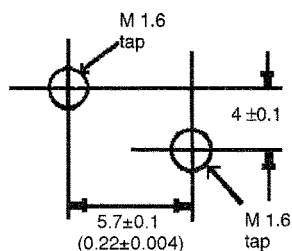
Unit: mm (inch)

### ■ D3C



## ■ Mounting holes

When mounting the D3C with screws, use M1.6 mounting screws with plain washers or spring washers. Tighten the screws to a torque of  $4.9$  to  $9.8 \times 10^2$  N.

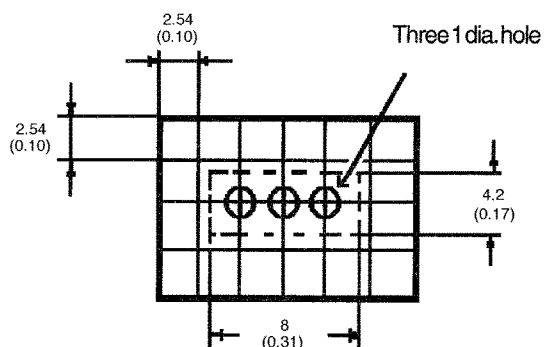


**Note:** Unless otherwise specified, a tolerance of  $\pm 0.2$  mm applies to all dimensions.

## ■ Precautions

### ■ Mounting

Refer to the following dimensions for PCB mounting. The distance between two adjacent terminals is 2.54 mm.



When soldering each terminal of the D3C, apply a soldering iron rated at 30 W for no longer than three seconds. Do not impose any external force to the terminals for approximately one minute after the terminals are soldered.

Make sure that the terminals of the D3C are insulated from one another and the ground.

Do not allow the lever to be pressed beyond the TTP.

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To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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