

Low-torque Basic Switch

D2MC

Highly Reliable Rotary-action Switch for Low Torque Operation

- 0.5 A rated model (D2MC-01□) employs crossbar alloy #1 contacts which exhibit unsurpassed contact reliability in very small load ranges.
- High-capacity 5 A Model (D2MC-5□) employs silver contacts.
- Long life (10,000,000 mechanical operations min.) through use of a movable coil spring.



Ordering Information

Direction of actuation	OF	5 A	0.5 A
Clockwise	5.1 g • cm max.	D2MC-5E	D2MC-01E
	7.6 g • cm max.	D2MC-5F	D2MC-01F
	10.2 g • cm max.	D2MC-5H	D2MC-01H
Counterclockwise	5.1 g • cm max.	D2MC-5EL	D2MC-01EL
	7.6 g • cm max.	D2MC-5FL	D2MC-01FL
	10.2 g • cm max.	D2MC-5HL	D2MC-01HL

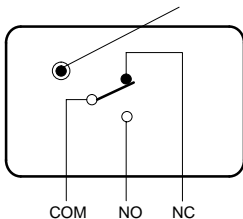
Note: All the models listed here are supplied without actuator lever. If an actuator lever is required, please order separately by indicating the model name of the actuator lever.
See *Accessories*.

Specifications

■ Ratings

Item	D2MC-5□	D2MC-01□
Electrical ratings	5 A at 125/250 VAC (resistive load)	0.5 A t 125VAC/30 VDC (resistive load)
Inrush current	NC: 15 A; NO: 7 A	0.5 A

Contact Form



■ Characteristics

Item	D2MC-5□	D2MC-01□
Operating speed	1° to 360°/sec	
Operating frequency	Mechanical: 240 operations/min Electrical: 20 operations/min	Mechanical: 240 operations/min Electrical: 60 operations/min
Insulation resistance	100 MΩ min. (at 500 VDC)	
Contact resistance	20 mΩ max. (initial value)	100 mΩ max. (initial value)
Dielectric strength	600 VAC, 50/60 Hz for 1 min between non-continuous terminals 1,500 VAC, 50/60 Hz for 1 min between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal part	
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude	
Shock resistance	Destruction: 1,000 m/s ² (approx. 100G) Malfunction: D2MC-□E: 100 m/s ² (approx. 10G) D2MC-□F: 100 m/s ² (approx. 10G) D2MC-□H: 200 m/s ² (approx. 20G)	
Life expectancy	Mechanical: 10,000,000 operations min. Electrical: 100,000 operations min.	Mechanical: 10,000,000 operations min. Electrical: 100,000 operations min. (1,000,000 operations at 0.1 A, 125 VAC/30 VDC)
Ambient temperature	Operating: -25°C to 80°C (with no icing)	
Ambient humidity	Operating: 85% max.	
Weight	Approx. 10.5 g	

Note: All the models listed here are supplied without actuator lever. If an actuator lever is required, please order separately by indicating the model name of the actuator lever.
See "Accessories".

■ Approved Standards

UL (File No. E41515)

CSA (File No. LR21642)

D2MC-5□ series: 5 A, 125 VAC
5 A, 250 VAC

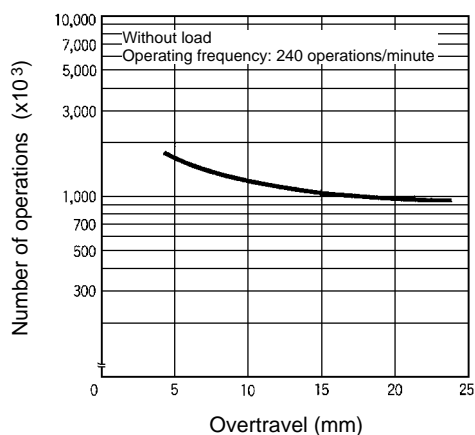
D2MC-01□ series: 0.5 A, 125 VAC
0.5 A, 30 VDC

■ Operating Characteristics

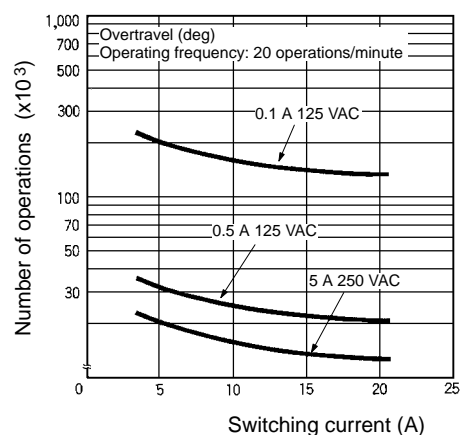
Model	D2MC-□E	D2MC-□F	D2MC-□H
OF max.	0.5 mN • m (5.1 gf • cm)	0.75 mN • m (7.6 gf • cm)	1.0 mN • m (10.2 gf • cm)
RF min.	0.05 mN • m (0.6 gf • cm)	0.09 mN • m (0.9 gf • cm)	0.13 mN • m (1.3 gf • cm)
PT max.	21°		
OT min.	17°		
MD min.	3°		
RT min.	5°		
TT min.	38°		
FP	15±3°		

Engineering Data

Mechanical Life Expectancy



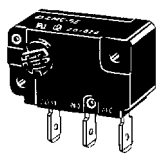
Electrical Life Expectancy



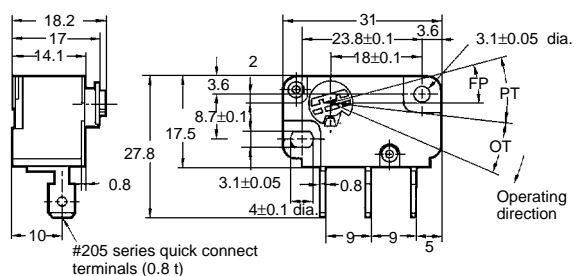
Dimensions

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

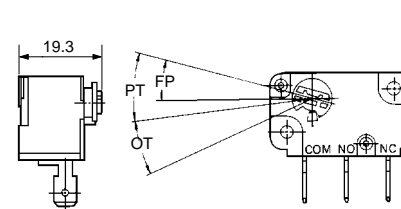
Snap-on Mounting



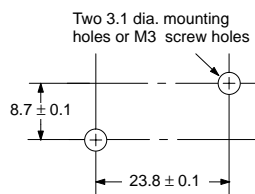
Clockwise



Counterclockwise



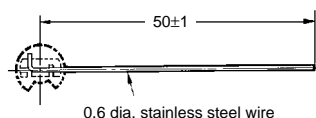
Mounting Holes



Accessories (Order Separately)

■ Actuator Lever

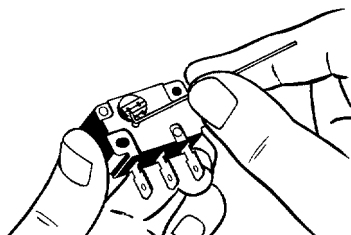
CAA1M for Snap-on Mounting



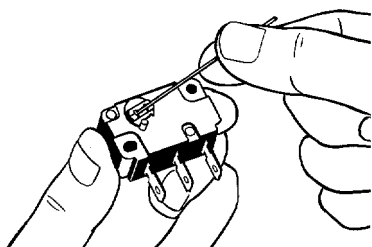
In addition to the standard wire lever model shown here, various other levers are available upon request.

Mounting Actuator Lever

1. Insert the end of the actuator lever into the hole in the rotary disc.



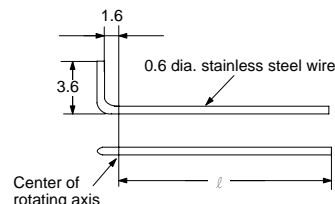
2. Push the lever down in the direction of the groove in the rotary disc.



Designing Own Actuator

If you decide to make your own actuator lever, the materials used should be stainless steel, piano wire, hard aluminum wire, etc.

There are no restrictions on the tip shape or length of the actuator lever. However, if the lever is too long, improper switch resetting or contact chattering may occur. Therefore, the shape of lever as shown below is suitable.



The appropriate value of dimension (l) from the fulcrum is 50 mm.

Precautions

Mounting/Soldering

Use M3 mounting screws with plain washers or spring washers to mount the switch. Tighten the screws to a torque of 3 kg • cm (0.29 N • m).

When soldering a lead wire to a terminal of the D2MC, use a soldering iron with a maximum capacity of 60 W and do not take more than 5 s to solder the lead wire, otherwise the characteristics of the D2MC may be altered.

Applying a soldering iron for too long a time or using one that is rated at more than 60 W may degrade the switch characteristics.

Do not change the operating position by modifying the actuator.

Microvoltage/current Load

For details, refer to "General Information".

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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