OMRON

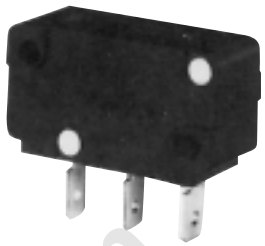
SUBMINIATURE

Basic Switch

D2MC

Low Torque Basic Switch

- Highly reliable rotary-action switch for low torque operation
- 0.5 A rated type (D2MC-01□) employs crossbar alloy contacts which exhibit unsurpassed contact reliability in very small load ranges
- High-capacity 5 A type (D2MC-5□) employs silver contacts
- Long life (10,000,000 mechanical operations min.) through use of a movable coil spring



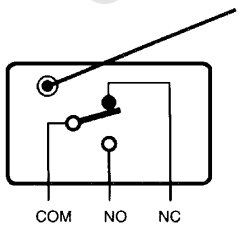
Ordering Information

Terminal	Rated Current	Operating Torque	Part Number	
			Direction of actuator	
			Clockwise	Counterclockwise
Quick connect #205	5 A	5.1 g-cm	**D2MC-5E**	**D2MC-5EL**
		7.6 g-cm	**D2MC-5F**	**D2MC-5FL**
		10.2 g-cm	**D2MC-5H**	**D2MC-5HL**
	0.5 A	5.1 g-cm	**D2MC-01E**	**D2MC-01EL**
		7.6 g-cm	**D2MC-01F**	**D2MC-01FL**
		10.2 g-cm	**D2MC-01H**	**D2MC-01HL**

Note: 1. All the types listed are supplied without actuator lever. If an actuator lever is required, please order separately by indicating the type name of the actuator lever. See “Accessories.”

2. The above switches accept the one-touch snap-in actuator. If retainer mounting is desired, contact OMRON for the appropriate information.

■ CONTACT FORM



Specifications

Model	Electrical ratings	inrush current
D2MC-5□	5 A, 125/250 VAC (resistive load)	NC: 15 A, NO: 7A
D2MC-01□	0.5 A, 125 VAC/30 VDC (resistive load)	0.5 A

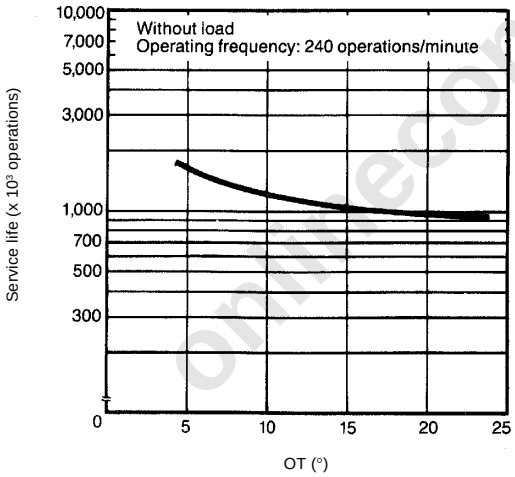
Characteristics

		D2MC-5□	D2MC-01□
Operating Speed	1 to 360°/second		
Operating frequency	Mechanical	240 operations per minute	240 operations per minute
	Electrical	20 operations per minute	60 operations per minute
Contact resistance		20 mΩ max. (initial)	100 mΩ max. (initial)
Insulation resistance		100 mΩ max. (at 500 VDC)	
Dielectric strength		600 VAC, 50/60 Hz for 1 minute between nonconnected terminals 1,500 VAC, 50/60 Hz for 1 minute between current-carrying part and ground and between noncurrent-carrying part and terminal	
Vibration	Malfunction durability	10 to 55 Hz, 1.5 mm double amplitude	
Shock	Mechanical durability	1,000 m/s^2 (approx. 100 g)	
	Malfunction durability	D2MC-□E: 100 m/s^2 (approx. 10 g) D2MC-□F: 100 m/s^2 (approx. 10 g) D2MC-□H: 200 m/s^2 (approx. 20 g)	
Ambient temperature	Operating	-25° to 80°C	
Humidity		85% RH max.	
Service life (at rated OT value)	Mechanical	10,000,000 operations min.	
	Electrical	100,000 operations min.	100,000 operations min. (1,000,000 operations at 0.1A, 125 VAC/30VDC)
Weight		Approx. 10.5 g	

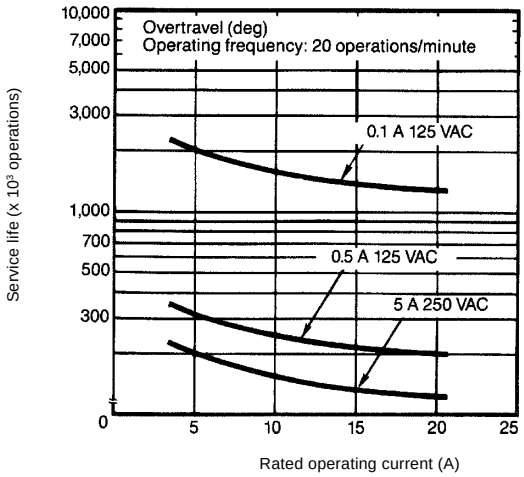
Note: Data shown are of initial value.

■ CHARACTERISTIC DATA

Mechanical service life



Electrical service life (p.f. = 1)



■ APPROVALS

UL (File No. E41515) / CSA (File No. LR21642)

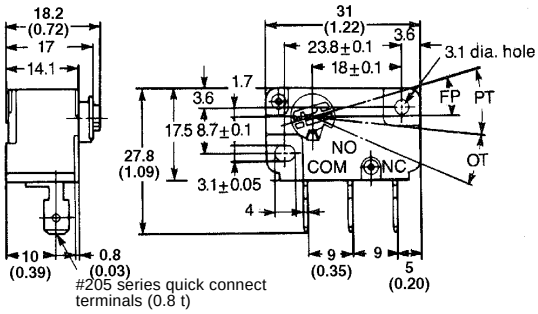
Type	Rating
D2MC-5□ Series	5 A, 125 VAC/250 VAC
D2MC-01□ Series	0.5 A, 125 VAC/30 VDC

Note: The rated values approved by each of the safety standards (e.g. UL, CSA) may be different from the performance characteristics individually defined in this catalog.

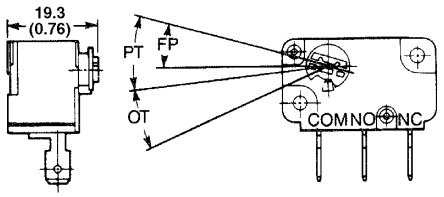
Dimensions

Unit: mm (inch)

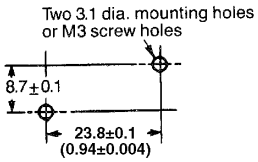
Snap-on mounting
Clockwise type



Counterclockwise type



Mounting holes



Operating characteristics	D2MC-□E	D2MC-□F	D2MC-□H
OT max.	5.1 g-cm	7.6 g-cm	10.2 g-cm
RT min.	0.6 g-cm	0.9 g-cm	1.3 g-cm
PT max.	21°	21°	21°
OT min.	17°	17°	17°
MD min.	3°	3°	3°
RT min.	5°	5°	5°
TT min.	38°	38°	38°
FP	15 ± 3°	15 ± 3°	15 ± 3°

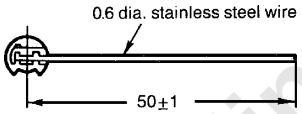
Note: Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions..

Accessories

(Order separately)

■ ACTUATOR LEVER

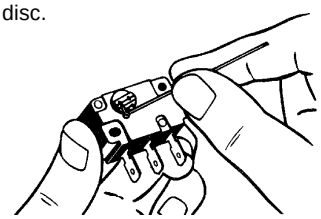
Model CAA1M for snap-on mounting



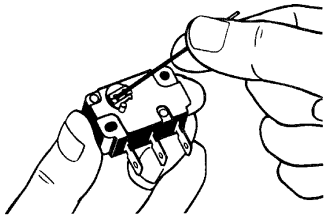
In addition to the standard wire lever type shown here, various other levers are available upon request.

■ MOUNTING ACTUATOR LEVER

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



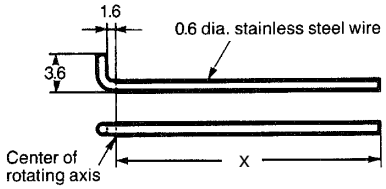
2. Push the lever down in the direction of the groove in the rotary disc.



■ DESIGNING YOUR OWN ACTUATOR LEVER

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 the lever as shown below is suitable.



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

■ MICROVOLTAGE/-CURRENT LOAD TYPE

For details, refer to “General Information.”

Precautions

■ MOUNTING/SOLDERING

When mounting the switch with screws, use M3 screws with plane washers or spring washers. Tighten the screws at a torque of 3 kg-cm.

To solder the lead to the terminal, apply a soldering iron rated at 60 W max. quickly (within 5 seconds) with the actuator at the free position.

Note that 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.

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