

D3M



Subminiature Basic Switch

- Easy wiring ensured through the quick-connect terminals
- External actuator mounts in either of two directions
- Horizontal layout of terminals saves mounting space
- Same internal mechanism as our SS-Series
- ROHS Compliant

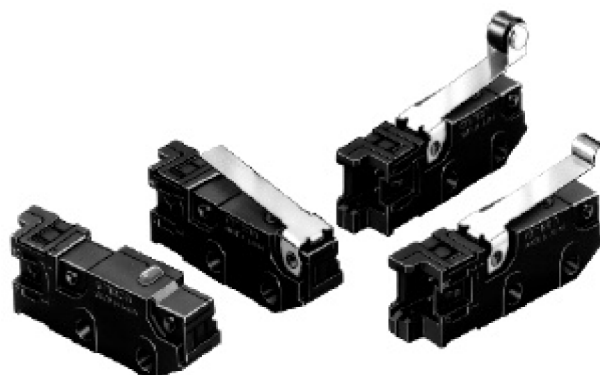
Part	Rated Resistive Load - Switch	Actuator types	Contact form	Operating Force	Seal type	Termination Style	Service Life - Electrical (Min. @ Rated Loads)
D3M-01	0.1A @ 30VDC	Pin plunger	SPST-NC	153g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01K1	0.1A @ 30VDC	Hinge lever	SPST-NC	51g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01K1-3	0.1A @ 30VDC	Hinge lever	SPST-NO	51g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01L1	0.1A @ 30VDC	Hinge lever	SPST-NC	102g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01L1-3	0.1A @ 30VDC	Hinge lever	SPST-NO	102g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01K2	0.1A @ 30VDC	Hinge roller lever	SPST-NC	51g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01K2-3	0.1A @ 30VDC	Hinge roller lever	SPST-NO	51g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01L2	0.1A @ 30VDC	Hinge roller lever	SPST-NC	102g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01L2-3	0.1A @ 30VDC	Hinge roller lever	SPST-NO	102g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01K3	0.1A @ 30VDC	Simulated roller lever	SPST-NC	51g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01K3-3	0.1A @ 30VDC	Simulated roller	SPST-NO	51g	Unsealed	JST Dipole XA	200,000 ops

		lever				Connector	
D3M-01L3	0.1A @ 30VDC	Simulated roller lever	SPST-NC	102g	Unsealed	JST Dipole XA Connector	200,000 ops
D3M-01L3-3	0.1A @ 30VDC	Simulated roller lever	SPST-NO	102g	Unsealed	JST Dipole XA Connector	200,000 ops

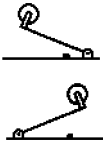
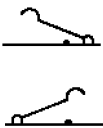
Subminiature Snap Action Switch D3M

Saves Wiring Effort, Production Steps, and Time

- Easy wiring ensured through the Quick-Connect Terminals
- External actuator mounts in either of two directions
- Horizontal layout of terminals saves mounting space
- Same internal mechanism as the OMRON SS Subminiature Snap Action Switch
- RoHS Compliant



Ordering Information

Actuator	Actuator mounting position	Contact type	Model
Pin plunger 	—	SPST-NC	D3M-01
		SPST-NO	D3M-01-3
Hinge lever 	High ratio operating position	SPST-NC	D3M-01K1
		SPST-NO	D3M-01K1-3
	Standard operating position	SPST-NC	D3M-01L1
		SPST-NO	D3M-01L1-3
Hinge roller lever 	High ratio operating position	SPST-NC	D3M-01K2
		SPST-NO	D3M-01K2-3
	Standard operating position	SPST-NC	D3M-01L2
		SPST-NO	D3M-01L2-3
Simulated roller lever 	High ratio operating position	SPST-NC	D3M-01K3
		SPST-NO	D3M-01K3-3
	Standard operating position	SPST-NC	D3M-01L3
		SPST-NO	D3M-01L3-3

■ Connectors

Refer to *Wiring* under the Precautions section of this data sheet.

Specifications

■ Characteristics

Permissible operating speed (see note 1)		0.1 mm/s to 1 m/s
Permissible operating frequency	Mechanical	400 operations/min max.
	Electrical	60 operations/min max.
Insulation resistance		100 MΩ min. at 500 VDC
Contact resistance (initial value)		100 mΩ max. including connector and 50-mm AWG28 lead wire resistance
Dielectric strength	Between terminals of the same polarity	1,000 VAC at 50/60 Hz for 1 min
	Between charged metal part and ground	1,500 VAC at 50/60 Hz for 1 min
	Between non-charged metal part and each terminal	1,500 VAC at 50/60 Hz for 1 min
Vibration resistance	Malfunction (See Note 2.)	10 to 55 Hz, 1.5-mm double amplitude for 1 ms max. with contacts closed or open.
Shock resistance	Destruction	1,000 m/s ² (approx. 100G)
	Malfunction (See Note 2.)	300 m/s ² (approx. 30G) for 1 ms max. with contacts closed or open.
Life expectancy	Mechanical	500,000 operations (at full-stroke operating speed of 10 mm/s at a frequency of 60 operations/min)
	Electrical	200,000 operations (at full-stroke operating speed of 10 mm/s at a frequency of 30 operations/min)
Enclosure rating		IP00
Degree of protection against electric shock		Class I
Proof tracking index (PTI)		175
Ambient temperature	Operating	-25°C to 85°C (with no icing)
Ambient humidity	Operating	85% max.
Weight		Approx. 2 g (pin plunger model)

Note: 1. The permissible operating speed applies to pin plunger models.

2. If a lever actuator model is used, the above vibration resistance conditions will apply when the actuator is in the maximum over-travel position.

■ Operating Characteristics

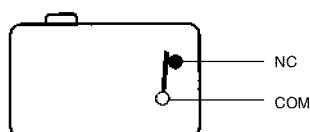
Characteristics	Part number						
	D3M-01 D3M-01-3	D3M-01K1 D3M-01K1-3	D3M-01L1 D3M-01L1-3	D3M-01K2 D3M-01K2-3	D3M-01L2 D3M-01L2-3	D3M-01K3 D3M-01K3-3	D3M-01L3 D3M-01L3-3
Max. operating force (OF)	153 gf	51 gf	102 gf	51 gf	102 gf	51 gf	102 gf
Min. reset force (RF)	25 gf	6 gf	10 gf	6 gf	10 gf	6 gf	10 gf
Min. pretravel (PT)	0.6 mm	—	—	—	—	—	—
Min. overtravel (OT)	0.4 mm	1.2 mm	0.7 mm	1.2 mm	0.7 mm	1.2 mm	0.7 mm
Max. movement differential (MD)	0.1 mm	0.8 mm	0.6 mm	0.8 mm	0.6 mm	0.8 mm	0.6 mm
Max. free position (FP)	—	14.0 mm	11.5 mm	19.7 mm	17.2 mm	16.2 mm	13.6 mm
Operating position (OP)	8.4±0.3 mm	10.0±0.8 mm	9.2±0.6 mm	15.7±0.8 mm	14.9±0.6 mm	12.2±0.8 mm	11.3±0.6 mm

Note: 1. A tolerance of ±0.4 mm applies to all of the above dimensions unless otherwise specified.

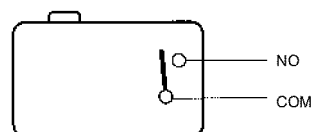
2. The operating characteristics apply when each actuator is moved in the direction indicated by the arrow and "A."

■ Contact Form

SPST-NC



SPST-NO



Approved Standards

EN61058-1

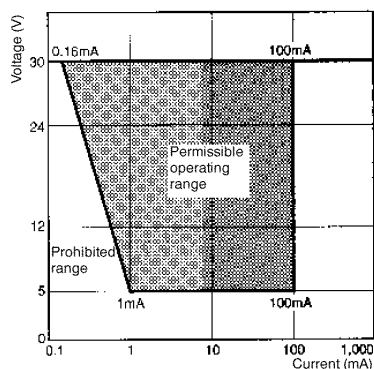
UL1054

CSA C22.2 No. 55

Ratings

Rated voltage	Resistive load
30 VDC	0.1 A

Use the D3M in the following permissible operating range.



Minimum Applicable Load (Level N)

Voltage	Resistive load
5 VDC	1 mA

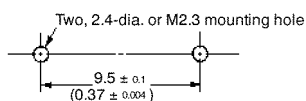
Refer to *Minimum Load* under the Precautions section of this data sheet.

Dimensions

Unit: mm (inch)

Mounting Dimensions for All Models

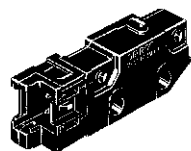
Use M2.3 screws, flat washers, and spring washers to mount the D3M securely. Make sure that the tightening torque applied to each screw is within a range from 2.3 to 2.7 kgf • cm.



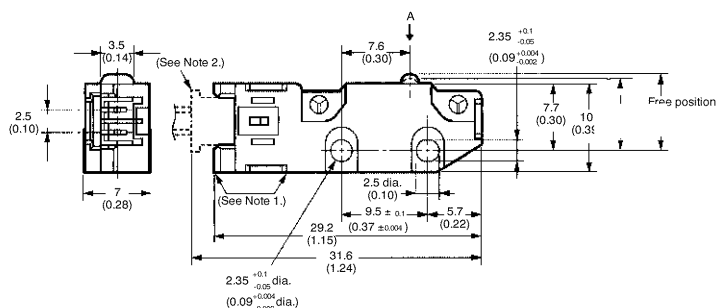
Pin Plunger

D3M-01

D3M-01-3

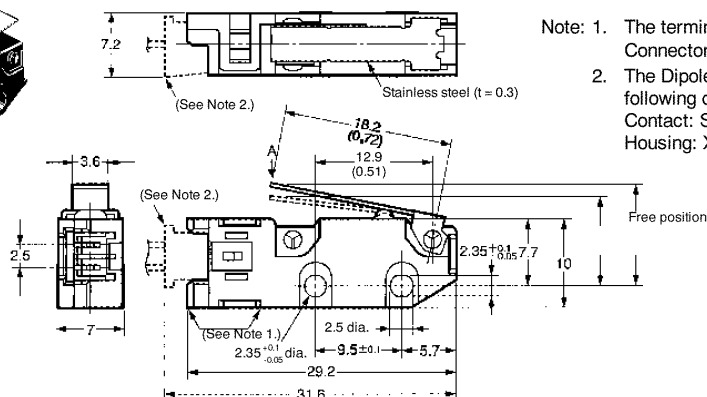
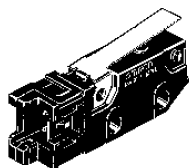


- Note: 1. The terminals connect to JST's Dipole XA Connector.
2. The Dipole XA Connector consists of the following components.
Contact: SAX-001T-P0.6
Housing: XAP-02V-1(13)



■ Hinge Lever

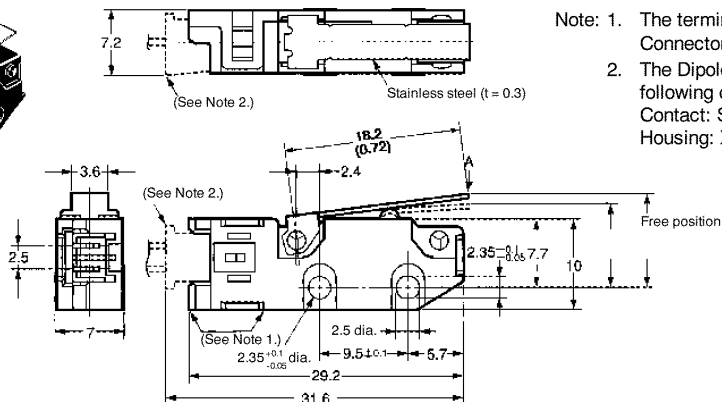
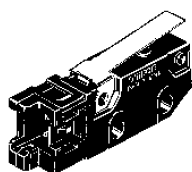
D3M-01K1
D3M-01K1-3



- Note: 1. The terminals connect to JST's Dipole XA Connector.
2. The Dipole XA Connector consists of the following components.
Contact: SAX-001T-P0.6
Housing: XAP-02V-1(13)

■ Hinge Lever

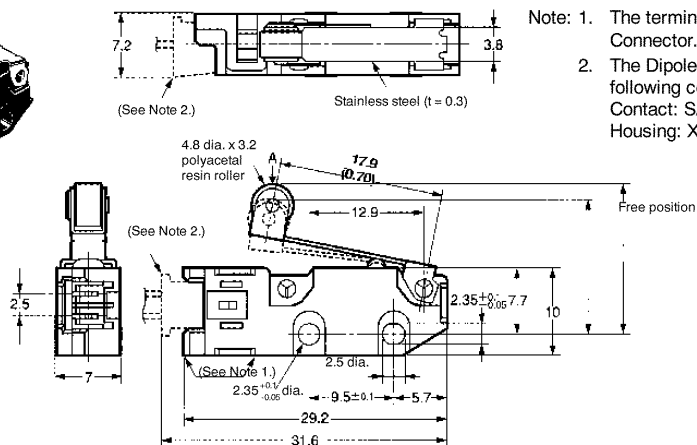
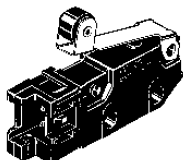
D3M-01L1
D3M-01L1-3



- Note: 1. The terminals connect to JST's Dipole X Connector.
2. The Dipole XA Connector consists of the following components.
Contact: SAX-001T-P0.6
Housing: XAP-02V-1(13)

■ Hinge Roller Lever

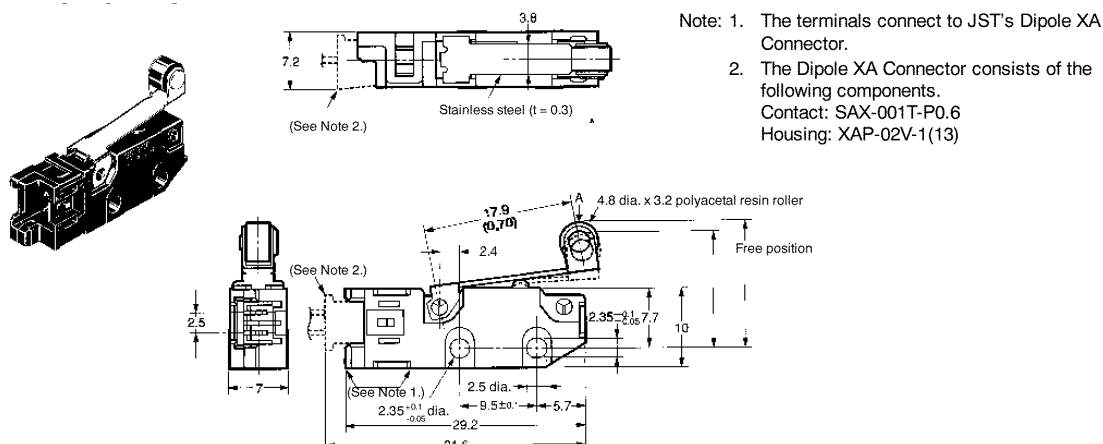
D3M-01K2
D3M-01K2-3



- Note: 1. The terminals connect to JST's Dipole XA Connector.
2. The Dipole XA Connector consists of the following components.
Contact: SAX-001T-P0.6
Housing: XAP-02V-1(13)

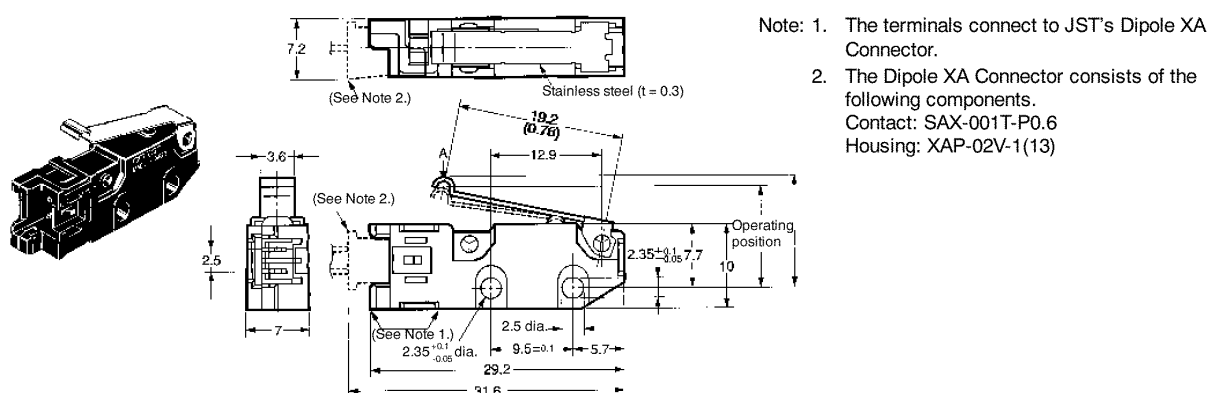
■ Hinge Roller Lever

D3M-01L2
D3M-01L2-3



■ Simulated Roller Lever

D3M-01K3
D3M-01K3-3



■ Simulated Roller Lever

D3M-01L3
D3M-01L3-3

