## Sub-miniature Snap Action Switch



DM1-01P-30-3

## Electrical Specifications

| Rated Voltage | $: 125 \mathrm{~V} \mathrm{AC} 1 \mathrm{~A} / \mathrm{DC} 5 \mathrm{~V} 30 \mathrm{~mA}$ |
| :--- | :--- |
| Contact Resistance | $: \leq 100 \mathrm{~m} \Omega$ |
| Operating Force | $: 20 \sim 50 \mathrm{gf}$ |
| Free Position | $: 10.4 \mathrm{~mm} \pm 0.8 \mathrm{~mm}$ |
| Operating Position | $: 8.8 \mathrm{~mm} \pm 0.8 \mathrm{~mm}$ |
| Reliable Rating | $: 500,000$ Cycles |
| Mechanical Life | $: 10,000 \mathrm{Cycles}$ |
| Electrical Life | $: \geq 100 \mathrm{M} \Omega 500 \mathrm{~V}$ DC |
| Insulation Resistance | $: 500 \mathrm{VAC} / 1$ minute |
| Withstand Voltage | $: H a n d$ Soldering |
| Soldering Temperature | $:-25^{\circ} \mathrm{C}$ to $+65^{\circ} \mathrm{C}$ |
| Operating Temperature | $:<85 \% \mathrm{RH}$ |
| Ambient Humidity Used |  |

: 125V AC 1A / DC 5V 30mA
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$\geq 100 \mathrm{M} \Omega 500 \mathrm{~V}$ DC
:
: $-25^{\circ} \mathrm{C}$ to $+65^{\circ} \mathrm{C}$
: < $85 \%$ RH

| Electrical Characteristics |  |  |
| :---: | :---: | :---: |
| Items | Test Conditions | Criteria |
| Contact <br> Resistance | Applying a static load twice the operating force to the button, measurements shall be made between the terminals. Measurement shall be made with a stabilization contact resistance meter for $2 \mathrm{~m} \Omega$ precision under the condition which a voltage of DC5V and a current of 0.1 A shall be applied between the terminals. | Refer to individual product drawing |
| Insulation Resistance | Spec. Voltage is applied between each pair of terminals and between the terminal and the metal frame for one minute. <br> Measurement shall be made with a test instrument of insulation resistance under the condition which a voltage of spec. voltage is applied between the terminals. | Refer to individual product drawing |
| Dielectric withstand in voltage | Spec. voltage shall be applied across terminals and frame for one minute. | There shall be no breakdown |
| Bounce | Lightly striking the center of the button at a rate encountered in normal use (3 to 4 operating per sec.) bounce shall be tested at "ON" and "OFF". | 5 ms max |
| Mechanical characteristics |  |  |
| Free Position | Position of switch plunger or actuation when on external force is applied. | Refer to individual product drawing |
| Operating Position | Position of switch plunge or actuator at which point contacts snap from normal to operated position. Note that the case of flexible of adjustable actuators. | Refer to individual product drawing |
| Operating Force | Placing the switch such that the direction of switch operation is vertical, and then gradually increasing the load applied to the button, the maximum load for the button to come to operating position shall be measured. | Refer to individual product drawing |
| Terminal Strength | Placing the switch such that the direction of switch operation is vertical, a static load of 3 kgf Max shall be applied to the tip of the terminal in the direction of operation for one minute. | There shall be no sign of damage mechanically and electrically. |

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| Button Strength | Placing the switch such that the direction of switch operation is vertical, a static load of 3 kgf Max shall be applied to the centre. Of the button in the direction of button operation for one minute. | There shall be no sign of damage mechanically and electrically. |
| :---: | :---: | :---: |
| Soldering characteristics |  |  |
| Hand Soldering | Use a soldering iron of 30 watts, controlled at $350-360^{\circ} \mathrm{C}$ approximately 3 seconds 1 time while applying solder. | (1) A new uniform coating of solder shall cover a minimum of $90 \%$ of the surface being immersed. <br> (2) There shall be no defects in appearance or in the mechanical functions. |
| Durability characteristic |  |  |
| Mechanical life | (1) Without loading <br> (2) Operating speed : 120 cycles/minute <br> (3) Push force : maximum value of operating force twice <br> (4) Life: 500,000 cycles | After test: <br> (1) Contact resistance: 1 1 Max. (2) Insulation |
| Electrical life | (1) Operating speed : 10 cycles/minute <br> (2) Push force: maximum value of operating force twice <br> (3) which the load of 1 A 125 V AC <br> Life: 10,000 cycles | resistance: $10 \mathrm{M} \Omega$ Min. <br> (3) Bounce: 5m sec. Max. <br> (4) Withstand volt- <br> age: AC500V, 1 minute <br> (5) Operating <br> force: $30 \%$ of initial value (6) There shall be no defects in appearance or in the mechanical functions. |

## Diagram



Dimensions: Millimetres
Tolerance: $\pm 0.2 \mathrm{~mm}$

## Sub-miniature Snap Action Switch

## Structure chart



| NO. | Part Name | Generic Class | Qty |
| :---: | :---: | :---: | :---: |
| 1 | Base | PBT |  |
| 2 | Case |  |  |
| 3 | Button |  |  |
| 4 | Lever | SUS301 |  |
| 5 | Spring Plate | C1720 |  |
| 6 | Contact | Silver alloy |  |
| 7 | Terminal | C2680 | 3 |

## Part Number Table

| Description | Part Number |
| :---: | :---: |
| Microswitch, Snap Action, Short Lever, SPDT, 1A, 125V AC, White, THT | DM1-01P-30-3 |

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