## Perfecting the Art of Electronics <br> ALPS

## 2.5mm-travel Large-sized Horizontal Type SPUN Series

| Changeover timing |  | Non shorting |
| :---: | :---: | :---: |
| Travel |  | 2.5 mm |
| Total travel |  | 3.5 mm |
| Rating |  | Standard |
| Operating force |  | $2 \pm 1 \mathrm{~N}$ |
| Mounting method |  | PC board |
| Poles |  | 2 |
| Operation |  | Momentary |
| Terminal type |  | Snap-in |
| Operating temperature range |  | $-10^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ |
| Rating (max.)/(min.) (Resistive load) |  | 0.1A 30V DC/50رA 3V DC |
| Electrical performance | Contact resistance (Initial performance/After lifetime) | $20 \mathrm{~m} \Omega$ max. $/ 40 \mathrm{~m} \Omega$ max. |
|  | Insulation resistance | $100 \mathrm{M} \Omega \mathrm{min} .500 \mathrm{~V}$ DC |
|  | Voltage proof | 500 V AC for 1 minute |
| Mechanical performance | Terminal strength | 5 N for 1 minute |
|  | Actuator strength | 50N |
|  | Pulling direction | 50N |
| Durability | Operating life without load | 30,000 cycles $40 \mathrm{~m} \Omega$ max. |
|  | Operating life with load (at max. rated load) | 10,000 cycles $40 \mathrm{~m} \Omega$ max. |
| Environmental performance | Cold | $-20^{\circ} \mathrm{C} 96 \mathrm{~h}$ |
|  | Dry heat | $85^{\circ} \mathrm{C} 96 \mathrm{~h}$ |
|  | Damp heat | $40^{\circ} \mathrm{C}$, 90 to $95 \% \mathrm{RH} 96 \mathrm{~h}$ |


| Minimum order unit (pcs.) Japan | 250 |  |
| :---: | :---: | :---: |
|  | Export | 1,250 |

Dimensions


Mounting Hole Dimensions


Viewed from direction $A$ in the dimensions.

## Actuator Configuration at Front Edge



Terminal Configuration


## Circuit Diagram



## Packing Specifications

## Bulk

| Number of packages 1 case / Japan | 250 |
| :---: | :---: |
| 1 case / export packing | 1,250 |
| Export package measurements (mm) | $400 \times 270 \times 290$ |

## Soldering Conditions

## Reference for Dip Soldering

| Items | Preheating temperature | $100^{\circ} \mathrm{C}$ max. |
| :--- | :--- | :--- |
|  | Preheating time | 60 s max. |
| Dip soldering | Soldering temperature | $260 \pm 5^{\circ} \mathrm{C}$ |
|  | Duration of immersion | $10 \pm 1 \mathrm{~s}$ |


| Soldering temperature | $350 \pm 5^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Soldering time | $3+1 / 0 \mathrm{~s}$ |

Products Line of Knob

| Knob outline drawing | Model | Knob attachment <br> height (H) |  |
| :--- | :--- | :--- | :--- |
| Square knob | Color:Black |  | (2) |
| Round knob | Color:Black |  |  |

We recommend the use of adhesive to secure the knob when mounting onto switches.


Notes are common to this series/models.

1. This site catalog shows only outline specifications. When using the products, please obtain formal specifications for supply.
2. Please place purchase orders per minimum order unit (integer).
3. Products other than those listed in the above chart are also available. Please contact us for details.
