

Solderable with auto dipping and available in a wide variety



### Typical Specifications



| Items                       | Specifications   |
|-----------------------------|------------------|
| Total resistance tolerance  | ±20%             |
| Maximum operating voltage   | Please see P.355 |
| Operating force             | 0.3 to 2.5N      |
| Operating life              | 15,000 cycles    |
| Operating temperature range | -25°C to +70°C   |

### Product Line

#### Insulated lever

| Number of resistor elements | Travel (mm) | Lever types | Length of lever L <sub>1</sub> (mm) | Total resistance (k Ω) | Resistance taper | Detent  | Mounting plate | Minimum order unit (pcs.) |        | Products No.        | Drawing No. |
|-----------------------------|-------------|-------------|-------------------------------------|------------------------|------------------|---------|----------------|---------------------------|--------|---------------------|-------------|
|                             |             |             |                                     |                        |                  |         |                | Japan                     | Export |                     |             |
| Single-unit                 | 15          | J-1         | 5                                   | 10                     | 1B               | Without | Without        | 700                       | 2,800  | <b>RS151111J026</b> | 1           |
|                             | 20          |             |                                     |                        |                  |         |                |                           |        | <b>RS201111J011</b> | 2           |
|                             | 30          | A           | 10                                  |                        |                  |         |                | 600                       | 2,400  | <b>RS301111A01G</b> | 3           |
|                             | 45          | B           |                                     |                        |                  |         |                | 1,300                     | 1,300  | <b>RS451111B010</b> | 4           |

#### Metal lever

| Number of resistor elements | Travel (mm) | Lever types | Length of lever (L <sub>1</sub> ) (mm) | Total resistance (k Ω) | Resistance taper | Detent  | Mounting plate | Minimum order unit (pcs.) |        | Products No.         | Drawing No. |
|-----------------------------|-------------|-------------|--|------------------------|------------------|---------|----------------|---------------------------|--------|----------------------|-------------|
|                             |             |             |  |                        |                  |         |                | Japan                     | Export |                      |             |
| Single-unit                 | 15          | 9-1         | 10                                     | 10                     | 1B               | Without | With           | 700                       | 2,800  | <b>RS151111A9A03</b> | 5           |
|                             | 20          |             |  |                        |                  |         |                |                           |        | <b>RS201111A9A03</b> | 6           |
|                             | 30          |             |  |                        |                  |         |                | 600                       | 2,400  | <b>RS301111A9012</b> | 7           |
|                             | 45          |             |  |                        |                  |         |                | 1,300                     | 1,300  | <b>RS451111A900F</b> | 8           |
|                             | 60          |             |  |                        |                  |         |                | 900                       | 900    | <b>RS601111A9A07</b> | 9           |
| Dual-unit                   | 30          | 4           | 20                                     | 10                     | 1B               | Without | With           | 600                       | 2,400  | <b>RS30112A900S</b>  | 10          |
|                             | 45          |             |  |                        |                  |         |                | 1,150                     | 1,150  | <b>RS45112A400G</b>  | 11          |
|                             | 60          |             |  |                        |                  |         |                | 900                       | 900    | <b>RS60112A6A0C</b>  | 12          |

#### Note

Other varieties are also available. Refer to "Other Specifications" (P.355, 356).

### Packing Specifications

#### Tray

| Product No.                  | Number of resistor elements | Number of packages (pcs.) |                        | Export package measurements (mm) |
|------------------------------|-----------------------------|---------------------------|------------------------|----------------------------------|
|                              |                             | 1 case /Japan             | 1 case /export packing |                                  |
| <b>RS151</b><br><b>RS201</b> | Single-unit                 | 700                       | 2,800                  | 518×378×422                      |
| <b>RS301</b>                 | Single-unit/<br>Dual-unit   | 600                       | 2,400                  |                                  |
| <b>RS451</b>                 | Single-unit                 | 1,300                     | 1,300                  | 529×373×273                      |
|                              | Dual-unit                   | 1,150                     | 1,150                  |                                  |
| <b>RS601</b>                 | Single-unit/<br>Dual-unit   | 900                       | 900                    |                                  |

Refer to P.355 for other specifications.  
Refer to P.356 for configuration details.  
Refer to P.357 for ordering products not listed.  
Refer to P.383 for soldering conditions.

Dimensions

Unit:mm

| No. | Style | PC board mounting hole dimensions<br>(Viewed from mounting side) |
|-----|-------|--|
| 1   |       |  |
| 2   |       |  |
| 3   |       |  |
| 4   |       |  |
| 5   |       |  |

The length of Lever (L<sub>1</sub>) can be customized. Refer to P.356 for details.

Rotary  
Potentiometers

Slide  
Potentiometers

General-use

Mixer

Dimensions

Unit:mm

| No. | Style | PC board mounting hole dimensions<br>(Viewed from mounting side) |
|-----|-------|--|
| 6   |       |  |
| 7   |       |  |
| 8   |       |  |
| 9   |       |  |
| 10  |       |  |

The length of Lever (L<sub>1</sub>) can be customized. Refer to P.356 for details.

Dimensions

Unit:mm

| No. | Style | PC board mounting hole dimensions<br>(Viewed from mounting side) |
|-----|-------|--|
| 11  |       |  |
| 12  |       |  |

The length of Lever (L<sub>1</sub>) can be customized. Refer to P.356 for details.

Rotary Potentiometers

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# Super Slide™ (Standard Type) / Other Specifications

In addition to the Product Line, we accommodate the following specifications. Combinations not included in the Product Line are treated as semi-standard products.

## Travel Distance Variety

|             |    |    |    |    |    |
|-------------|----|----|----|----|----|
| Travel (mm) | 15 | 20 | 30 | 45 | 60 |
|-------------|----|----|----|----|----|

## Total Resistance Variety

|                        |    |    |    |     |     |
|------------------------|----|----|----|-----|-----|
| Total resistance (k Ω) | 10 | 20 | 50 | 100 | 200 |
|------------------------|----|----|----|-----|-----|

## Resistance Taper

|                  |    |    |    |     |     |
|------------------|----|----|----|-----|-----|
| Resistance taper | 1B | 3B | 4B | 10A | 15A |
|------------------|----|----|----|-----|-----|

### Note

DC (10V DC) is also available. (Tapped types are not available)

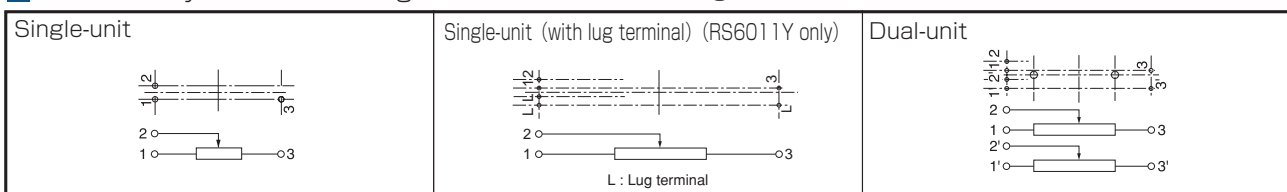
## Rated Power

| Travel | Single-unit |              | Dual-unit |              |
|--------|-------------|--------------|-----------|--------------|
|        | 1B          | 4B, 10A, 15A | 1B, 3B    | 4B, 10A, 15A |
| 15mm   | 0.05W       | 0.025W       | 0.025W    | 0.012W       |
| 20mm   | 0.1W        | 0.05W        | 0.05W     | 0.025W       |
| 30mm   | 0.2W        | 0.1W         | 0.1W      | 0.05W        |
| 45mm   | 0.25W       | 0.125W       | 0.125W    | 0.06W        |
| 60mm   | 0.2W        | 0.1W         | 0.2W      | 0.1W         |

## Maximum Operating Voltage

| Travel | Single-unit     |                 | Dual-unit       |                 |
|--------|-----------------|-----------------|-----------------|-----------------|
|        | 1B              | 4B, 10A, 15A    | 1B, 3B          | 4B, 10A, 15A    |
| 15mm   | 100V AC, 10V DC | 50V AC, 10V DC  | 100V AC, 10V DC | 50V AC, 10V DC  |
| 20mm   |                 |                 |                 |                 |
| 30mm   | 200V AC, 10V DC | 150V AC, 10V DC | 200V AC, 10V DC | 150V AC, 10V DC |
| 45mm   |                 |                 |                 |                 |
| 60mm   |                 |                 |                 |                 |

## Terminal Layout / Circuit Diagram (Viewed from Mounting Side)



### Note

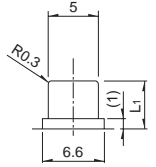
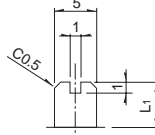
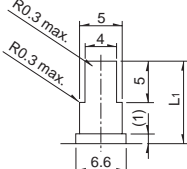
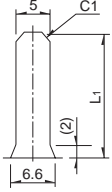
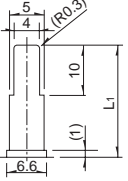
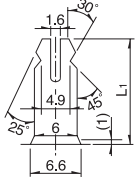
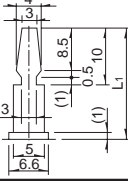
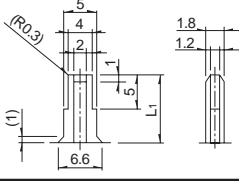
Marked are specifications recommended by Alps Alpine.

Refer to P.357 for ordering products not listed.

# Super Slide™ (Standard Type) / Other Specifications

In addition to the Product Line, we accommodate the following specifications. Combinations not included in the Product Line are treated as semi-standard products.

## Lever Types

| Metal lever    |  | Insulated lever |                | Unit:mm |     |   |   |                |                |    |    |  |
|----------------|--|-----------------|----------------|---------|-----|---|---|----------------|----------------|----|----|--|
| Code           | Dimensions   | Code            | Dimensions     |         |     |   |   |                |                |    |    |  |
| 9-2            |  <table border="1" style="margin-left: 200px;"> <tr><td>t=1.2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>5</td></tr> </table>                        | t=1.2           | L <sub>1</sub> | 5       | J-1 |  <table border="1" style="margin-left: 200px;"> <tr><td>t=2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>5</td></tr> </table>                       | t=2   | L <sub>1</sub> | 5              |    |    |  |
| t=1.2          |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 5              |  |                 |                |         |     |   |   |                |                |    |    |  |
| t=2            |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 5              |  |                 |                |         |     |   |   |                |                |    |    |  |
| 9-1            |  <table border="1" style="margin-left: 200px;"> <tr><td>t=1.2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>10</td></tr> </table>                       | t=1.2           | L <sub>1</sub> | 10      | A   |  <table border="1" style="margin-left: 200px;"> <tr><td>t=2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>10</td></tr> <tr><td>15</td></tr> </table> | t=2   | L <sub>1</sub> | 10             | 15 |    |  |
| t=1.2          |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 10             |  |                 |                |         |     |   |   |                |                |    |    |  |
| t=2            |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 10             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 15             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 6              |  <table border="1" style="margin-left: 200px;"> <tr><td>t=1.2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>15</td></tr> <tr><td>20</td></tr> </table>  | t=1.2           | L <sub>1</sub> | 15      | 20  | B   |  <table border="1" style="margin-left: 200px;"> <tr><td>t=2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>10</td></tr> <tr><td>15</td></tr> </table> | t=2            | L <sub>1</sub> | 10 | 15 |  |
| t=1.2          |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 15             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 20             |  |                 |                |         |     |   |   |                |                |    |    |  |
| t=2            |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 10             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 15             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 4              |  <table border="1" style="margin-left: 200px;"> <tr><td>t=1.2</td></tr> <tr><td>L<sub>1</sub></td></tr> <tr><td>15</td></tr> <tr><td>20</td></tr> </table> | t=1.2           | L <sub>1</sub> | 15      | 20  | C   |  <table border="1" style="margin-left: 200px;"> <tr><td>L<sub>1</sub></td></tr> <tr><td>10</td></tr> <tr><td>15</td></tr> </table>                      | L <sub>1</sub> | 10             | 15 |    |  |
| t=1.2          |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 15             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 20             |  |                 |                |         |     |   |   |                |                |    |    |  |
| L <sub>1</sub> |  |                 |                |         |     |   |   |                |                |    |    |  |
| 10             |  |                 |                |         |     |   |   |                |                |    |    |  |
| 15             |  |                 |                |         |     |   |   |                |                |    |    |  |

## Corresponding Specifications

|            |   |
|------------|---|
| Dust cover | Available                                 |
| Tap        | Available<br>(Only the center-positioned) |

### Note

Marked are specifications recommended by Alps Alpine.

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# Super Slide™ (Standard Type) / Ordering Products Not Listed

In addition to the Product Line, we accommodate the following specifications. Combinations not included in the Product Line are treated as semi-standard products. Please refer to the notation example below.

## Sample Part Number



Travel

| Code | Travel (mm) | Code | Travel (mm) |
|------|-------------|------|-------------|
| 15   | 15          | 45   | 45          |
| 20   | 20          | 60   | 60          |
| 30   | 30          | —    | —           |

Number of resistor elements

| Code                           | Number of resistor elements |
|--------------------------------|-----------------------------|
| 1 (Enter "Y" for 60 mm travel) | Single                      |
| 2                              | Dual                        |

Lever type / Length of lever (mm)

| Insulated lever |               |        | Metal lever |               |        |
|-----------------|---------------|--------|-------------|---------------|--------|
| Code            | Configuration | Length | Code        | Configuration | Length |
| J1              | J-1           | 5      | 91          | 9-1           | 10     |
| OA              | A             | 10     | 92          | 9-2           | 5      |
|                 |               | 15     | 04          | 4             | 15     |
| OC              | C             | 10     |             |               | 20     |
|                 |               | 15     | 06          | 6             | 15     |
| OB              | B             | 10     |             |               | 20     |
|                 |               | 15     |             |               |        |

Length of operation unit  
If the length is less than 10 mm, add a "0" before the number.  
(e.x., 5 mm length= "05" )

Detent

| Code | Detent  |
|------|---------|
| C0   | Without |
| C1   | Center  |

Mounting plate

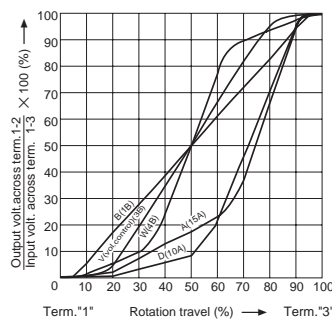
| Code | Mounting plate |
|------|----------------|
| P0   | Without        |
| P1   | With           |

Resistance taper

| Code | Resistance taper |
|------|------------------|
| A    | 15A              |
| B    | 1B               |
| D    | 10A              |
| W    | 4B               |
| V    | 3B               |

Total resistance

| Code | Total resistance (kΩ) | Code | Total resistance (kΩ) |
|------|-----------------------|------|-----------------------|
| 103  | 10                    | 104  | 100                   |
| 203  | 20                    | 204  | 200                   |
| 503  | 50                    | —    | —                     |



**Note**  
Marked are specifications recommended by Alps Alpine.

Rotary  
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Slide  
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# Slide Potentiometers

## List of Varieties

| Type                         |                                    | Standard Type   |   |   | Master Type   |
|------------------------------|------------------------------------|---|---|---|---|
| Series                       |                                    | Super Slide™  | Slim Slide™ (Slim 4)  | Compact Reflow Type   | K Fader   |
|                              |                                    | RS □□ 1   | RS □□ H   | RS08U   | RS □□ K   |
|                              |                                    | Single-unit/Dual-unit   | Single-unit/Dual-unit   | Single-unit   | Single-unit/Dual-unit   |
| Photo                        |                                    |  |  |   |  |
| Travel (mm)                  |                                    | 15, 20, 30, 45, 60  | 15, 20, 30  | 8   | 60, 100   |
| Direction of lever           |                                    | Vertical  |   | Horizontal  | Vertical  |
| Lever material               |                                    | Metal / Resin   | Resin   | Resin   | Metal   |
| Operating temperature range  |                                    | -25°C to +70°C  |   | -10°C to +70°C  | -10°C to +60°C  |
| Operating life               |                                    | 15,000 cycles   | 10,000 cycles   |   | 100,000 cycles (Standard)<br>300,000 cycles (CP)                                    |
| Available for automotive use |                                    | ○   | —   | —   | —   |
| Life cycle (availability)    |                                    |  |  |  |  |
| Electrical performance       | Total resistance (k Ω)             | 10, 20, 50, 100, 200  | 5, 10, 20, 50, 100, 200, 250  | 10  | 10, 50, 100 (Standard)<br>10 (CP)   |
|                              | Resistance taper                   | 10A, 15A, 1B, 3B, 4B  | 15A, 1B, 3B   | 1B  | 15A, 1B   |
|                              | Rated Power                        | Please see P.355  | Please see P.362  | 0.025W  | 0.25W   |
|                              | Insulation resistance              | 100MΩ min. 250V DC  | Dual-unit: 100MΩ min. 250V DC   | 100MΩ min. 100V DC  | 100MΩ min. 250V DC  |
|                              | Voltage proof                      | 300V AC for 1 minute  | Dual-unit: 300V AC for 1 minute   | 100V AC for 1 minute  | 250V AC for 1 minute  |
|                              | Center-taps                        | Without / With  |   | Without   |   |
| Mechanical performance       | Operating force                    | 0.3 to 2.5N   | 0.6 <sup>+0.5</sup> <sub>-0.4</sub> N   | 0.17±0.15N  | Please see P.368  |
|                              | Center detent                      | Without / With  |   | Without   |   |
|                              | Stopper strength                   | 50N   | 30N   | 5N  | 100N  |
|                              | Lever push-pull strength           | 50N   | 30N   | 5N  | 100N  |
|                              | Lever wobble (mm)<br>※ Both sides  | $\frac{2(2 \times L)}{20}$  | 1.6 max.  | —   | $\frac{2(2 \times L)}{25}$  |
|                              | Detent slip-out force              | Operating force + (0.2 to 2N)   | Operating force + 0.3 <sup>+0.5</sup> <sub>-0.25</sub> N                          | —   | —   |
|                              | Lever deviation (mm)<br>※ One side | 0.5 max.  | —   | —   | 0.5 max.  |
| Terminal style               |                                    | Insertion   |   | Reflow  | Lead (Standard)<br>Connector (CP)   |
| Page                         |                                    | 351   | 358   | 364   | 365   |

|   |     |
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| Potentiometer Cautions                      | 384 |
| Potentiometers Measurement and Test Methods | 386 |
| Potentiometers Resistance Taper             | 388 |

### Notes

- "L" in the "Lever Wobble" column of the above table indicates the length of lever.
- RS □□  indicates travel.
- Indicates applicability to some products in the series.