

Compact and good operational feel, suitable for mixing console faders



## ■ Typical Specifications



| Items                       | Specifications                                               |
|-----------------------------|--------------------------------------------------------------|
| Total resistance tolerance  | ±20%                                                         |
| Maximum operating voltage   | 200V AC, 10V DC (Single-unit)<br>150V AC, 10V DC (Dual-unit) |
| Operating force             | 0.5 $^{+1.0}_{-0.4}$ N                                       |
| Operating life              | 30,000 cycles                                                |
| Operating temperature range | −10℃ to +60℃                                                 |

#### ■ Product Line

| Product Line                |             |            |                      |                        |                  |                           |        |              |
|-----------------------------|-------------|------------|----------------------|------------------------|------------------|---------------------------|--------|--------------|
| Number of resistor elements | Travel (mm) | Lever type | Length of lever (mm) | Total resistance (k Ω) | Resistance taper | Minimum order unit (pcs.) |        | Products No. |
|                             |             |            |                      |                        |                  | Japan                     | Export |              |
| Single-unit                 | 60          | 6          | 15                   | 10                     | 1B               | 900                       | 900    | RS6011SP6003 |
|                             |             |            |                      | 20                     | 15A              |                           |        | RS6011SP6004 |
| 10                          |             |            |                      | RS6011DP6002           |                  |                           |        |              |
| Dual-unit                   |             |            |                      | 20                     | RS6011DP6003     |                           |        |              |

### Note

Other varieties are also available. Refer to "Other Specifications" (P.409).

## ■ Packing Specifications

## Tray

|                           |                        |                                     |
|---------------------------|------------------------|-------------------------------------|
| Number of packages (pcs.) |                        | Export package measurements<br>(mm) |
| 1 case /Japan             | 1 case /export packing |                                     |
| 900                       | 900                    | 529×373×273                         |

## ■ Dimensions

| DIMENSIONS                                                                                              |                                                                                       | Unit:mm                                                                                                        |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Style                                                                                                   |                                                                                       | PC board mounting hole dimensions<br>(Viewed from mounting side)                                               |
| <p>75<br/>71<br/>2-M2<br/>9<br/>60(Travel)<br/>Mounting surface<br/>15<br/>10<br/>7<br/>0.4<br/>3.5</p> | <p>t=1.2<br/>5<br/>4<br/>4-R0.3 max<br/>10<br/>15 (L<sub>1</sub>)<br/>6.6<br/>(1)</p> | <p>2-ø2 hole<br/>70<br/>6-ø1.1 hole<br/>47.5<br/>25<br/>22.5<br/>12<br/>1.2<br/>6<br/>2.5<br/>17.5<br/>6.6</p> |
|                                                                                                         |                                                                                       | The RS6011SP uses lug terminals for terminals 1' 2' 3'.                                                        |

Refer to P.409 for other specifications.  
Refer to P.409 for details of lever types.  
Refer to P.410 for ordering products not listed.  
Refer to P.417 for soldering conditions.

In addition to the products listed, we can accommodate the follow specifications.

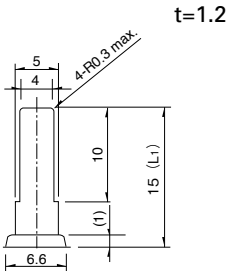
■ Total Resistance Variety

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

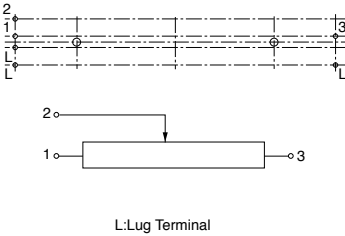
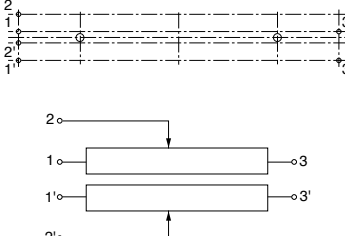
■ Resistance Taper

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

■ Lever Types

|                       |                                                                                                                |
|-----------------------|----------------------------------------------------------------------------------------------------------------|
| Configuration code    | 6<br>(Metal lever)                                                                                             |
| Dimensions            | <div><div>Unit:mm</div></div> |
| Length L <sub>1</sub> | 15                                                                                                             |

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

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Single-unit                                                                         | Dual-unit                                                                            |
|  |  |

■ Corresponding Specifications

|            |           |
|------------|-----------|
| Dust cover | Available |
|------------|-----------|

Notes

1. Marked are specifications recommended by Alps Alpine.
2. A variety of operational feels are available, so please inquire if you have a request.

When ordering product varieties that are not listed, specify referring to the examples below.

■ Sample Part Number

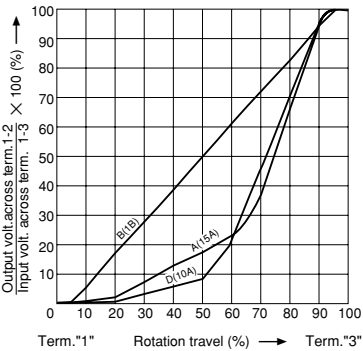
**R S 6 0 1 1 S P — B 1 0 3**

Number of resistor elements

|             |   |
|-------------|---|
| Single-unit | S |
| Dual-unit   | D |

Resistance taper

| Code | Resistance taper |
|------|------------------|
| A    | 15A              |
| B    | 1B               |
| D    | 10A              |



Total resistance

| Code | Total resistance (k Ω) |
|------|------------------------|
| 103  | 10                     |
| 203  | 20                     |
| 503  | 50                     |

Rotary  
Potentiometers

Slide  
Potentiometers

General-use

Mixer

| Type                         |                                   | Low-profile Master Type                                                           |                                                                                   | Motor-driven Master Type                                                           |                                                                                     |                                                                                     |
|------------------------------|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Series                       |                                   | Slim Type                                                                         | Super P Fader                                                                     | Motor N Fader                                                                      | Motor K Fader                                                                       | Motor V Fader                                                                       |
|                              |                                   | RS □□ N11S                                                                        | RS6011 □ P                                                                        | RS □□ N1 □ M                                                                       | RSA0K1 □ V                                                                          | RSA0V11M                                                                            |
|                              |                                   | Single-unit                                                                       | Single-unit/Dual-unit                                                             | Single-unit/Dual-unit                                                              | Single-unit/Dual-unit                                                               | Single-unit                                                                         |
| Photo                        |                                   |  |  |  |  |  |
| Travel (mm)                  |                                   | 60, 100                                                                           | 60                                                                                | 60, 100                                                                            | 100                                                                                 |                                                                                     |
| Direction of lever           |                                   | Vertical                                                                          |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| Lever material               |                                   | Metal                                                                             |                                                                                   |                                                                                    |                                                                                     | Resin                                                                               |
| Operating temperature range  |                                   | −10℃ to +60℃                                                                      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| Operating life               |                                   | 30,000 cycles                                                                     |                                                                                   |                                                                                    | 300,000 cycles                                                                      | 100,000 cycles                                                                      |
| Available for automotive use |                                   | —                                                                                 | —                                                                                 | —                                                                                  | —                                                                                   | —                                                                                   |
| Life cycle                   |                                   |  |  |   |  |  |
| Electrical performance       | Total resistance (k Ω)            | 10, 50, 100, 250                                                                  | 10, 20, 50                                                                        | 10, 50, 100, 250                                                                   | 10                                                                                  |                                                                                     |
|                              | Resistance taper                  | 15A, 1B, 10A                                                                      |                                                                                   | Single-unit: 1B<br>Dual-unit: Servo 1B<br>Audio 15A, 1B, 10A                       |                                                                                     | 1B                                                                                  |
|                              | Rated Power                       | 0.2W (RS60N11S)<br>0.5W (RSA0N11S)                                                | 0.2W (Single-unit)<br>0.1W (Dual-unit)                                            | 0.2W (RS60N1□M)<br>0.5W (RSA0N1□M)                                                 | 0.5W                                                                                |                                                                                     |
|                              | Insulation resistance             | 100MΩ min. 250V DC                                                                |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                              | Voltage proof                     | 250V AC for 1 minute                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                              | Center-taps                       | Without                                                                           |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| Mechanical performance       | Operating force                   | 0.3 <sup>+0.5</sup> <sub>−0.25</sub> N                                            | 0.5 <sup>+1.0</sup> <sub>−0.4</sub> N                                             | 0.8±0.5N                                                                           | Single-unit: 0.4±0.25N<br>Dual-unit: 0.25 to 0.9N                                   | —                                                                                   |
|                              | Center detent                     | Without                                                                           |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                              | Stopper strength                  | 100N                                                                              |                                                                                   |                                                                                    |                                                                                     | 10N                                                                                 |
|                              | Lever push-pull strength          | 50N                                                                               |                                                                                   |                                                                                    |                                                                                     | 20N                                                                                 |
|                              | Lever wobble (mm)<br>※ Both sides | $\frac{2(2 \times L)}{25}$                                                        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                              | Lever deviation (mm)              | 0.5 max. (One side)                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| Terminal style               |                                   | Insertion                                                                         |                                                                                   | Lead, Insertion                                                                    | Connector (Fader)<br>Lead (Motor)                                                   | Connector                                                                           |
| Page                         |                                   | 405                                                                               | 408                                                                               | 411                                                                                |                                                                                     |                                                                                     |

|                                             |     |
|---------------------------------------------|-----|
| Slide Potentiometers Soldering Conditions   | 417 |
| Potentiometer Cautions                      | 418 |
| Potentiometers Measurement and Test Methods | 420 |
| Potentiometers Resistance Taper             | 422 |

## Notes

1. Attenuation is specified for residual resistance.
2. "L" in the "Lever Wobble" column of the above table indicates the length of lever.

## Reference for Manual Soldering

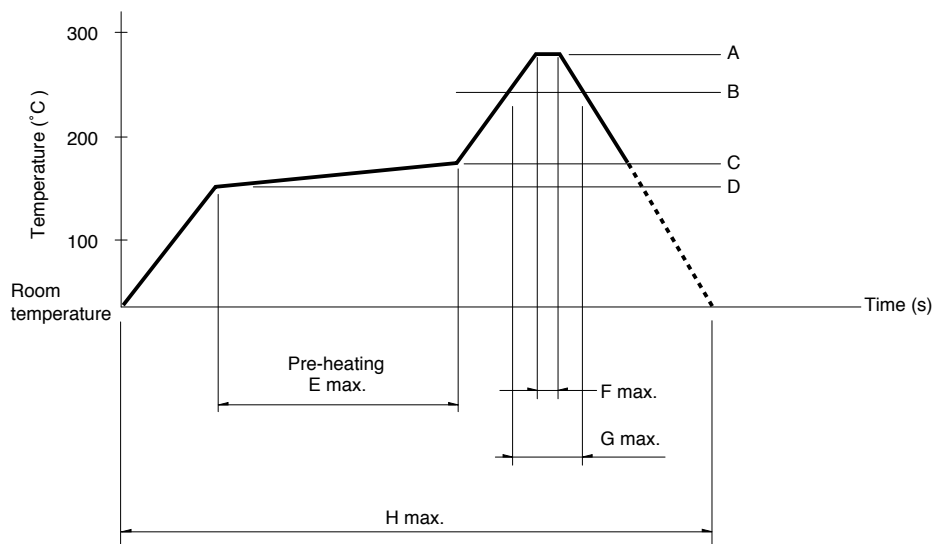
| Series                                                                                                     | Tip temperature | Duration of Soldering time | No. of solders |
|------------------------------------------------------------------------------------------------------------|-----------------|----------------------------|----------------|
| RS□□1, RS08U,<br>RS□□K (Standard), RS□□N,<br>RS□□N11S, RS6011□P,<br>RS□□N1□M,<br>RSA0K1□V (Motor terminal) | 350°C max.      | 3s max.                    | 1 time         |

## Reference for Dip Soldering

| Series                                           | Preheating                    |              | Dip soldering         |                | Number of soldering |
|--------------------------------------------------|-------------------------------|--------------|-----------------------|----------------|---------------------|
|                                                  | Soldering surface temperature | Heating time | Soldering temperature | Soldering time |                     |
| RS□□1, RS□□N,<br>RS□□N11S, RS6011□P,<br>RS□□N1□M | 100°C max.                    | 1 min. max.  | 260°C                 | 5s max.        | 1 time              |

## Example of Reflow Soldering Condition

Temperature profile



| Series | A     | B     | C     | D     | E      | F  | G   | H      | No. of reflows |
|--------|-------|-------|-------|-------|--------|----|-----|--------|----------------|
| RS08U  | 250°C | 200°C | 150°C | 150°C | 2 min. | 3s | 40s | 4 min. | 1 time         |

## Notes

1. When using an infrared reflow oven, solder may sometimes not be applied. Be sure to use a hot air reflow oven or a type that uses infrared rays in combination with hot air.
2. The temperatures given above are the maximum temperatures at the terminals of the products when employing a hot air reflow method. The temperature of the PC board and the surface temperature of the products may vary greatly depending on the PC board material, its size and thickness. Ensure that the surface temperature of the products does not rise to 250°C or greater.
3. Conditions vary to some extent depending on the type of reflow bath used. Be sure to give due consideration to this prior to use.



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331