

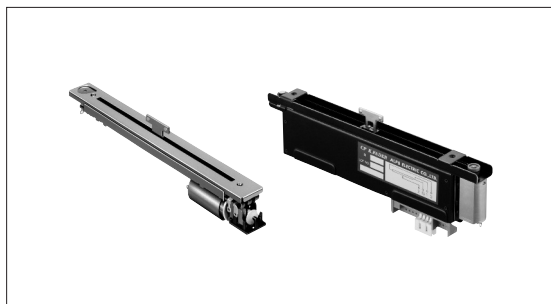
# Motor-driven Master Type (Motor N Fader, Motor K Fader)

RS□□N1□M/RSA0K1□V Series



Provides a superior operational feel with high-speed tracking in motor drive mode.

Rotary Potentiometers  
Slide Potentiometers



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## Typical Specifications

| Items                       | Specifications  |                            |
|-----------------------------|---|----------------------------|
|                             | Motor N fader   | Motor K fader              |
| Total resistance tolerance  | ±20%  |                            |
| Maximum operating voltage   | 10V DC, 200V AC(Travel:60mm)<br>10V DC, 500V AC(Travel:100mm) |                            |
| Operating force             | 0.3 to 1.3N   | 0.15 to 0.65N              |
| Operating life              | 30,000cycles  | CP type :<br>300,000cycles |
| Maximum current of motor    | 800mA or less(at 10V DC)                                      |                            |
| Rated voltage of motor      | 10V DC  |                            |
| Operating temperature range | -10°C to +60°C  |                            |

## Product Line

| Number of resistor elements | Travel (mm)  | Type                    | Lever type  | Length of lever (mm) | Total resistance (kΩ) | Resistance taper | Terminal style | Touch sense track | Minimum packing unit (pcs.) | Products No. | Drawing No. |
|-----------------------------|--------------|-------------------------|-------------|----------------------|-----------------------|------------------|----------------|-------------------|-----------------------------|--------------|-------------|
| Single-unit                 | 60           | Motor N Fader           | 9-T (T-bar) | 8.2                  | 10                    | 1B               | Lead           | With              | 400                         | RS60N11M9A0E | 1           |
|                             |              |                         |             |                      |                       |                  | For PC board   |                   | 240                         | RS60N11M9A0F | 2           |
|                             | 100          | Motor K Fader (CP type) |             |                      |                       |                  | Lead           |                   | 200                         | RSA0N11M9A0K | 3           |
|                             | For PC board |                         |             |                      |                       |                  | 160            |                   | RSA0N11M9A0J                | 4            |             |
|                             | Connector    |                         |             |                      |                       |                  | 84             |                   | RSA0K11V901S                | 5            |             |

## Packing Specifications

### Bulk/Tray

| Product No. | Terminal style | Packing specifications | Number of packages (pcs.) |                        | Export package measurements (mm) |
|-------------|----------------|------------------------|---------------------------|------------------------|----------------------------------|
|             |                |                        | 1 case /Japan             | 1 case /export packing |                                  |
| RS60N       | Lead           | Tray                   | 200                       | 400                    | 370 × 520 × 270                  |
|             | For PC board   |                        | 120                       | 240                    | 375 × 285 × 393                  |
| RSA0N       | Lead           |                        | 100                       | 200                    | 455 × 578 × 175                  |
|             | For PC board   |                        | 80                        | 160                    | 375 × 285 × 393                  |
| RSA0K       | Connector      | Bulk                   | 42                        | 84                     | 370 × 520 × 201                  |

## Notes

1. Products other than those listed in above products are also available. Please contact us for details.
2. Please place purchase orders per minimum order unit N (integer).

Refer to P.462 for product varieties.  
Refer to P.462 for details of lever types.  
Refer to P.462, 463, 470 for resistance taper.

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| No. | Style | Unit:mm   |
|-----|-------|---|
| 1   |       |   |
| 2   |       | <p><b>PC board mounting hole dimensions</b></p> <p>L:Lug terminal</p> |
| 3   |       |   |

Dimensions

Unit:mm

| No. | Style | PC board mounting hole dimensions |
|-----|-------|-----------------------------------|
| 4   |       | <p>L: Lug terminal</p>            |
| 5   |       |                                   |

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## Product Varieties

In addition to the recommended products, the following specifications can also be accommodated.

### Products Specifications

| Type                                 |                          | Travel (mm) | Model    | Touch sense track | Terminal                              |
|--------------------------------------|--------------------------|-------------|----------|-------------------|---------------------------------------|
| Single-unit                          | Motor N fader            | 60          | RS60N11M | Available         | For PC board for auto dipping<br>Lead |
|                                      |                          | 100         | RSA0N11M |                   |                                       |
|                                      | Motor K fader<br>CP type |             |          |                   | RSA0K11V                              |
| Dual-unit<br>(Servo+<br>Audio track) | Motor N fader            | 60          | RS60N12M |                   | Lead                                  |
|                                      |                          | 100         | RSA0N12M |                   |                                       |
|                                      | Motor K fader<br>CP type |             |          |                   |                                       |

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### Lever Types

Unit:mm

| Configuration code | 9-T (T-Bar) |
|--------------------|-------------|
| Dimensions         |             |

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### Total Resistance Variety

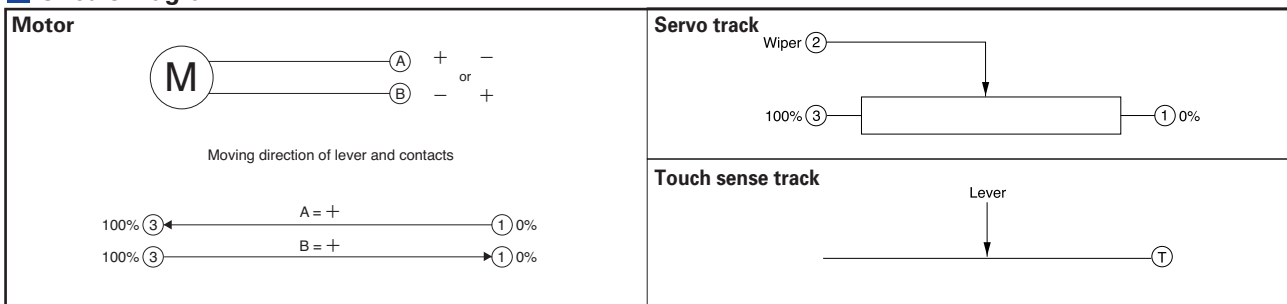
| Total resistance (kΩ) | 10※ | 50 | 100 | 250 |
|-----------------------|-----|----|-----|-----|
|                       |     |    |     |     |

※ Motor K fader: Only 10kΩ

### Resistance Taper

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

### Circuit Diagram



### Notes

1. [ ] marked are specifications recommended by ALPS.
2. Products other than those listed in the above list are also available. Please contact us for details.

Refer to P.463, 464, 470 for resistance taper.

## Orders Other Than Recommended Products

When ordering product varieties that are not listed in the Product Line, please specify by referring to the below example.

### Sample Part Number



Travel (mm)

|    |     |
|----|-----|
| 60 | 60  |
| A0 | 100 |

Number of resistor elements

|             |   |
|-------------|---|
| Single-unit | 1 |
| Dual-unit   | 2 |

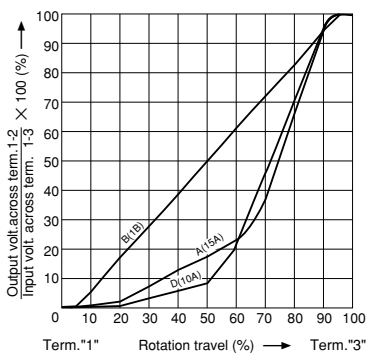
Touch sense track

| Code | Touch sense track |
|------|-------------------|
| T0   | Without           |
| T1   | With              |

Resistance taper

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

For dual-units specify the taper of the audio track. Servo track will always be 1B taper.



Total resistance

| Code | Total resistance (kΩ) |
|------|-----------------------|
| 103  | 10                    |
| 503  | 50                    |
| 104  | 100                   |
| 254  | 250                   |

### Note

marked are specifications recommended by ALPS.

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## Orders Other Than Recommended Products

When ordering product varieties that are not listed in the Product Line, please specify by referring to the below example.

### Sample Part Number

**R S A 0 K 1 1 V** — **T 0** — **B 1 0 3**

Number of resistor elements

|             |   |
|-------------|---|
| Single-unit | 1 |
| Dual-unit   | 2 |

Type

|         |   |
|---------|---|
| CP type | V |
|---------|---|

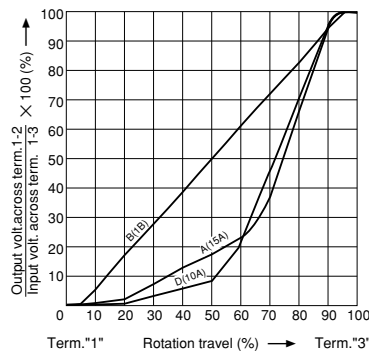
Touch sense track

| Code | Touch sense track |
|------|-------------------|
| T0   | Without           |
| T1   | With              |

Resistance taper

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

Appoint the taper of audio track in the case of dual-unit.  
Servo track is surely 1B taper.



Total resistance

| Code | Total resistance (kΩ) |
|------|-----------------------|
| 103  | 10                    |

### Note

marked are specifications recommended by ALPS.







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## List of Varieties

| Item                      | Master type   |     | Low-profile master type   |           |  |           | Motor-driven master type   |     |   |             |   |           |
|---------------------------|---|-----|---|-----------|--|-----------|--|-----|---|-------------|---|-----------|
|                           | RS□□K□□   |     | RS□□N1  |           | RS□□N11S   |           | RS6011□P   |     | RSA0K1□V  |             | RS□□N1□M  |           |
| Photo                     |  |     |  |           |   |           |  |     |                  |             |  |           |
| Outlined specifications   | Travel (mm)   |     | 60<br>100   |           |  |           | 60   |     | 100   |             | 60<br>100   |           |
|                           | Number of resistor elements   |     | Single-unit   | Dual-unit | Single-unit  | Dual-unit | Single-unit  |     | Dual-unit   | Single-unit |   | Dual-unit |
| Electrical Performance    | Total resistance (kΩ)   |     | 10, 50, 100   |           | RS□□N1 : 10, 50, 100, 250<br>RS□□N11S : 10, 50, 100, 250<br>RS6011□P : 10, 20, 50  |           |  |     | RS□□N1□M : 10, 50, 100, 250<br>RSA0K1□V : 10  |             |   |           |
|                           | Resistance taper  |     | 15A, 1B   |           | RS□□N1 : 15A, 1B, 10A<br>RS□□N1□S : 15A, 1B, 10A<br>RS6011□P : 15A, 1B, 10A  |           |  |     | Single-unit : 1B<br>Dual-unit : Servo 1B<br>Audio 15A, 1B, 10A                                      |             |   |           |
| Mechanical Performance    | Operating force   |     | Standard : 0.1 to 0.6N  |           | RS□□N1□<br>Single-unit : 0.05 to 0.8N<br>Dual-unit : 0.05 to 0.9N<br>RS6011□P<br>0.1 to 2.0N<br>RS□□N11S<br>0.05 to 0.8N |           |  |     | RS□□N1□M<br>0.3 to 1.3N<br><br>RSA0K1□V,<br>Single-unit : 0.15 to 0.65N<br>Dual-unit : 0.25 to 0.9N |             |   |           |
|                           | Stopper strength  |     | 100N  |           |  |           |  |     |   |             |   |           |
|                           | Lever push-pull strength  |     | 100N  |           | 50N  |           |  |     |   |             |   |           |
|                           | Lever deviation (mm)<br>※Both Side  |     | $\frac{2(2 \times L)}{25}$  |           |  |           |  |     |   |             |   |           |
|                           | Lever deviation   |     | 0.5mm max. (One side)   |           |  |           |  |     |   |             |   |           |
| Soldering                 | Manual soldering  |     | 350°C max. 3s max.  |           |  |           |  |     |   |             |   |           |
|                           | Dip soldering   |     | —   |           | 260°C max. 5s max.<br>RS□□N1□M (Lead type), RSA0K1□V : not available   |           |  |     |   |             |   |           |
| Environmental Performance | Cold  |     | -30±2°C for 96h   |           |  |           |  |     |   |             |   |           |
|                           | Dry heat  |     | 70±2°C for 240h   |           |  |           |  |     |   |             |   |           |
|                           | Damp heat   |     | 40±2°C, 90 to 95%RH for 96h   |           |  |           |  |     |   |             |   |           |
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### Notes

- Attenuation is specified for residual resistance.
- "L" in the "Lever Wobble" column of the above table indicates the length of lever.
- Products other than those listed in the above list are also available. Please contact us for details.