

# Resistive Sensors Linear Type

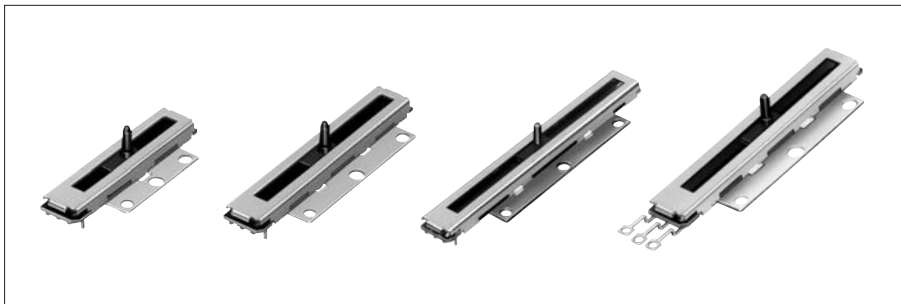
RDC10 Series

The high accuracy space saving design contributes to reduced weight and size of sets to be designed.

Magnetic  
Sensor

Piezo  
Sensor

Resistive  
Sensor



## Features

- Highly accurate linearity achieved through state-of-the-art printing technique.
- Light power operation type, which contributes to torque load reduction at drive motor.

## Applications

- For detecting feedback from motor drive units in digital video cameras and CD/MD changers
- For detecting the size in photo copiers, multifunctional printers and projectors
- Digital still cameras
- Car navigation system, car stereo

## Typical Specifications

Items	Specifications
Rating voltage	5V DC
Operating force	0.25N max.
Operating life	200,000cycles
Total resistance	10kΩ
Total resistance tolerance	±30%

## Product List

Travel (mm)	Linearity	Length of lever (mm)	Length of terminal (mm)	Model No.	Minimum packing unit (pcs.) ※
14	±0.5%	4.5	2	RDC1014A09	2,400
22				RDC1022A05	2,100
32				RDC10320RB	900
47		4.4		RDC1047A03	1,000


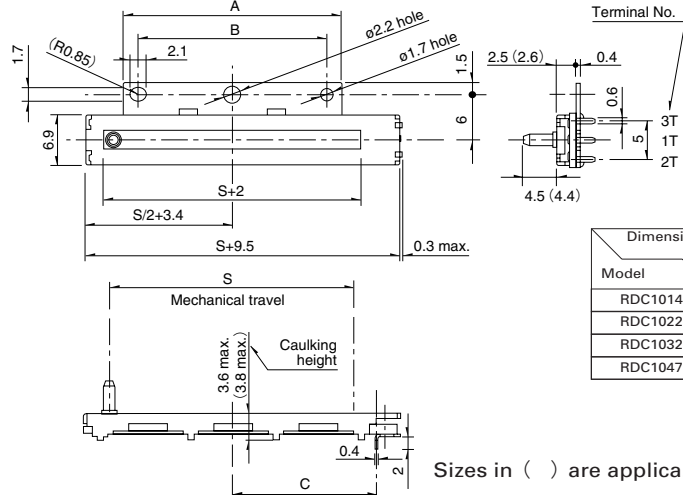
## Notes

1. Additional product specifications - referring to those not included in the above - are also available.
2. ※The minimum packing unit is the basic unit quantity of your order. Please place purchase orders in integer multiples of the minimum packing unit. Please contact us for export packaging details.

For product varieties, see P.27  
For other product specifications, see P.30

**Dimensions**

Unit:mm

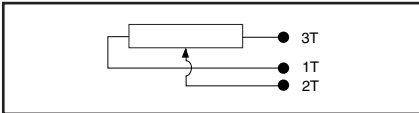
Photo	Style																									
	 <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Dimension</th> <th>S</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>RDC1014</td> <td>14</td> <td>19</td> <td>15</td> <td>10</td> </tr> <tr> <td>RDC1022</td> <td>22</td> <td>19</td> <td>15</td> <td>14</td> </tr> <tr> <td>RDC1032</td> <td>32</td> <td>29</td> <td>25</td> <td>19</td> </tr> <tr> <td>RDC1047</td> <td>47</td> <td>37</td> <td>33</td> <td>26.5</td> </tr> </tbody> </table> <p style="text-align: right;">Sizes in ( ) are applicable to RDC1047 only.</p>	Dimension	S	A	B	C	RDC1014	14	19	15	10	RDC1022	22	19	15	14	RDC1032	32	29	25	19	RDC1047	47	37	33	26.5
Dimension	S	A	B	C																						
RDC1014	14	19	15	10																						
RDC1022	22	19	15	14																						
RDC1032	32	29	25	19																						
RDC1047	47	37	33	26.5																						

Magnetic Sensor

Piezo Sensor

Resistive Sensor

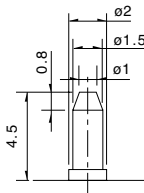
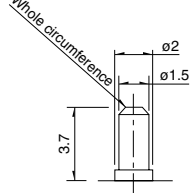
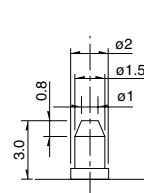
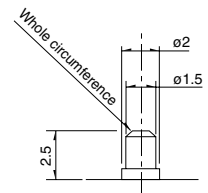
**Circuit Diagram**



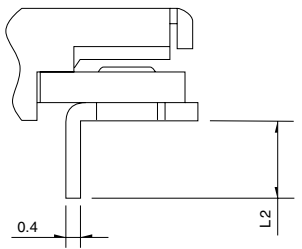
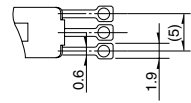
**Product Varieties**

In addition to the recommended products, the following specifications are also supported.

**Lever Variety** \* Sizes in ( ) are applicable to RDC1047 only

Length	4.5 (4.4)	3.7 (3.6)	3 (2.9)	2.5 (2.4)
Dimensions				

**Terminal Variety**

	For printed wiring				For lead wiring	
	Unit:mm				Unit:mm	
Dimensions						
Length L2	1.5	2	4	5.5		

**Note**

Shows the specification recommended by Alps.

## Product Specifications

Item	Style	Rotary type			Linear type	
	Model	RDC40	RDC501/RDC502/ RDC503/RDC506	RDC80	RDC10	RD7
<b>Operating temperature range</b>		-30°C to +80°C	-40°C to +120°C		-30°C to +85°C	-40°C to +105°C
<b>Electric performance</b>	<b>Total resistance tolerance</b>	±30%				±20%
	<b>Resistance taper</b>	Linear				
	<b>Rated voltage</b>	5V DC				12V DC
	<b>Max. operating voltage</b>	18V DC	16V DC		5V DC	18V DC
	<b>Linearity</b>	±1%	±2%	±3%	±0.5%	±1%
<b>Mechanical performance</b>	<b>Effective variable range</b>	13rotations	320°	330° (1-phase) 360° (2-phase)	S (travel) -2mm	S (travel)
	<b>Rotational angle</b>	—	(Without stopper)		—	
	<b>Rotational torque</b>	2mN·m max.		10mN·m max.	—	
	<b>Operating force</b>	—			0.25N max.	2N less.
<b>Durability</b>	<b>100,000cycles</b>	●	—	●	—	●
	<b>200,000cycles</b>	—	—	—	●	—
	<b>1,000,000cycles</b>	—	●	—	—	—

### Method for Regulating the Linearity

