

Sensors

Linear Type

RDC10 Series



High precision space-saving design contributes to reduce size and weight of the set.



Features

- High-precision linearity is attained by high-precision printing technology.
- Light operation force contributes to reduce torque load in motor driven mode.

Applications

- For detecting feedback from motor drive units in digital camcorders and CD changers, MD changers
- For detecting various types of size in copy machines, multifunctional printers and projectors

Typical Specifications

Items	Specifications
Rating voltage	5V DC
Operating force	0.25N max.
Operating life	200,000cycles
Total resistance	10k Ω
Total resistance tolerance	$\pm 30\%$

Recommended Products List

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

Note

※ For the switch attached, inner axis of the single-shaft or the dual-shaft type can be chosen. Please place purchase order per minimum packing unit. Please contact us for export packing details.

Rotary
Potentiometers

Slide
Potentiometers

Multi Control
Devices

Sensors

Rotary
Type

Linear
Type

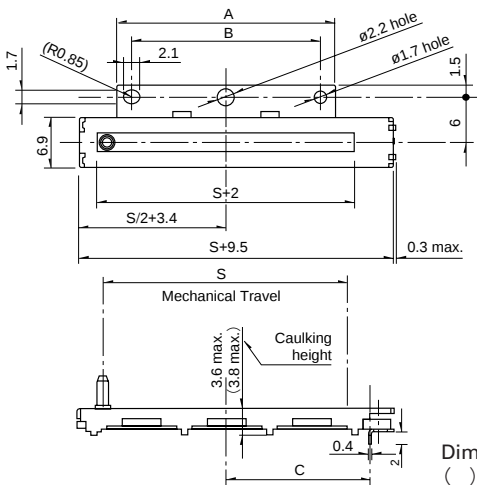
Refer to **P.200** for product varieties.
Refer to **P.201** for product specifications.

■ Dimensions

Unit:mm

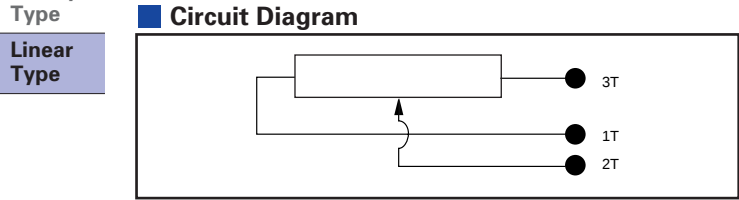


Style



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

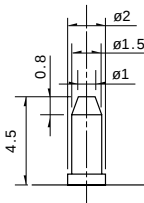
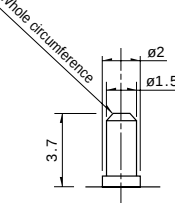
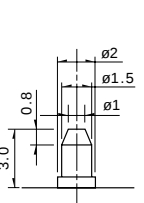
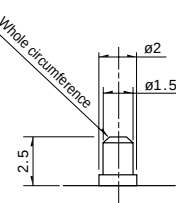
Dimensions surrounded by parentheses () are applicable to RDC1047 only.



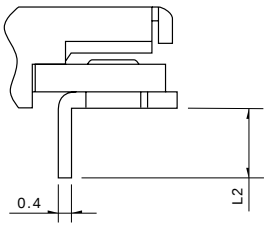
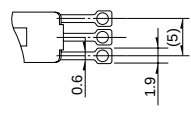
Product Varieties

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

■ Lever Variety * Size in () are applicable to RDC1047 only. Unit:mm

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

■ Terminal Variety

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

Note

marked are specifications recommended by ALPS.

Products Specifications

Items		Type	Rotary type						Linear type
		Model	RDC40	RDC501	RDC502	RDC503	RDC506	RDC80	RDC10
		Multiple turns	Horizontal type	Vertical type	Reflow type	Reflow type (Thin shape)	Reflow type		
Operating temperature range		−30℃ to +80℃	−40℃ to +120℃						−30℃ to +85℃
Electric performance	Total resistance tolerance	±30%							
	Resistance taper	Linear							
	Rated voltage	5V DC							
	Max. operating voltage	18V DC	16V DC					5V DC	
	Linearity	±1%	±2%				±3%	±0.5%	
Mechanical performance	Effective variable range	13 rotations	320°				330° (1-phase) 360° (2-phase)	S (Travel) −2mm	
	Rotational angle	—	(Without stopper)					—	
	Rotational torque	2mN・m max.					10mN・m max.	—	
	Operating force	—————						0.25N max.	
Durability	100,000cycles	●	—————				●	—	
	200,000cycles							●	
	1,000,000cycles	—	●						

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Sensors

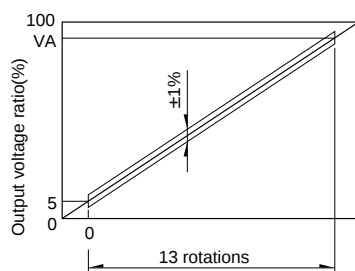
Rotary Type

Linear Type

Method for Regulating the Linearity

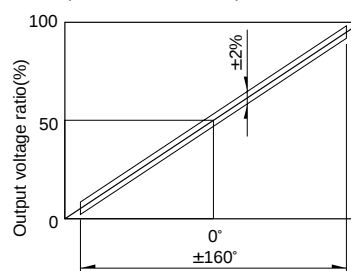
Model RDC40

- Reference taper : 90°/13 rotations
- VA is measured output value



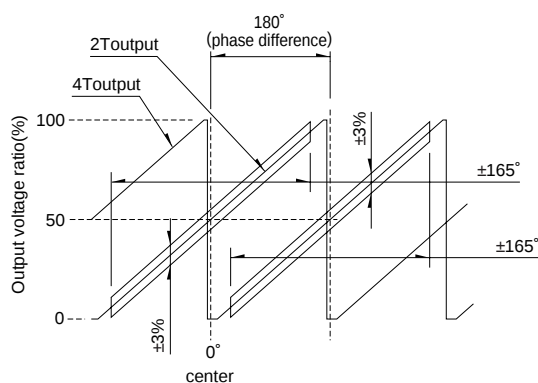
Model RDC50

- Reference taper : 100%/333.3°
- Output level of reference point is 50% .



Model RDC80

- Reference taper : 100%/340°
- The center position depends on the position depicted in the product drawing.



Model RDC10

This is the deviation to an ideal line shown below when the voltage applied between terminals 1 and 3 is assumed to be 100%. (Unit:percentage)

With rated voltage applied between terminals 1 and 3, the ideal line is assumed to be the straight line drawn between the measured output values V_B and V_A at specified reference positions B and A.

