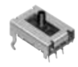
Type		Magnetic Rotary Type	Linear Type			
Series		RDCC0	RDC1010	RDC10	※ RD7	
Photo						
Direction of lever		Vertical			Vertical	Horizontal
Effective electrical angle (°)		30	—	—	—	
Linearity guarantee range (°)		±15	—	—	—	
Travel		—	10mm	14mm 22mm 32mm 47mm	8mm 12mm	8mm 9mm 12mm
Operating temperature range		0℃ to +50℃	−30℃ to +85℃		−40℃ to +105℃	
Operating life		10,000,000 cycles	50,000 cycles	200,000 cycles	100,000 cycles	
Available for automotive use		—	—	●	●	
Life cycle (availability)						
Mechanical performance	Operating force	—	0.25N max.		2N max.	
	Rotational torque	5mN·m max.	—	—	—	
Electrical performance	Total resistance tolerance	—	±30%		±20%	
	Linearity (%)	±2	±0.5		±1	
	Rated voltage (V DC)	5			12	
Environmental performance	Cold	−40℃ 240h			−40℃ 96h	
	Dry heat	85℃ 240h	80℃ 240h	90℃ 240h	105℃ 96h	
	Damp heat	60℃, 90 to 95%RH 240h			40℃, 90 to 95%RH 96h	
Terminal style		Connector	Insertion	Lead terminal/Insertion	Insertion	
Page		460	461		464	

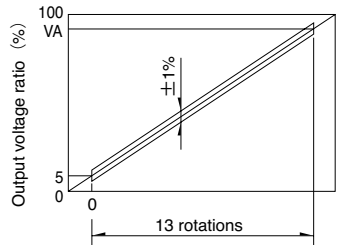
Notes

1. ※ The RD7 series are used to detect vehicle headlight angles.
2. ● Indicates applicability to all products in the series.

Method for Regulating the Linearity

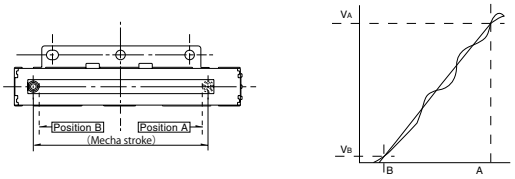
Model RDC40

1. Reference taper : 90%/13rotations
2. VA is measured output value



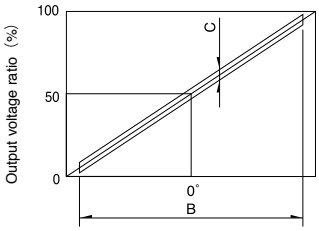
Model RDC10 / RD7

With rated voltage applied between terminals 1 and 3, the straight line which connects the measured output values VB and VA at specified reference positions B and A is assumed to be an ideal straight line, so that deviation against the ideal straight line when the voltage applied between terminals 1 and 3 is assumed to be 100% can be expressed as a percentage.



Model RDC50 / RDC90 / RD6R1A / RDCC0

1. Reference taper : 100%/A
2. Index point (0°) is 50% output point (RDC50/RDC90/RDCC0)
   The center (0°) is in the configuration diagram condition (RD6R1A)



Series	A	B	C
RDC50	333.3°	±160°	±2%
RDC90	80°	±30°	±3%
	260°	±122°	
RD6R1A	320°	±155°	±2%
RDCC0	30°	±15°	±2%

Resistive Position Sensors / Measurement and Test Methods

Resistive Position Sensor

(Total Resistance)

The total resistance, with the shaft (lever) placed at the end of terminal 1 or 3, shall be determined by measuring the resistance between the resistor terminals 1 and 3 unless otherwise specified.

(Rating Voltage)

The rating voltage corresponding to the rated power shall be determined by the following equation. When the resulting rated voltage exceeds the maximum operating voltage of a specific resistor, the maximum operating voltage shall be taken as the rated voltage.

$$E=\sqrt{P \cdot R}$$

E : Rated voltage (V)
P : Rated power (W)
R : Total nominal resistance (Ω)