

RK168 Rotary Motor-driven Type

Remote controllable and available in a wide variety of products



Typical Specifications



Items	Specifications
Total resistance tolerance	±20%
Maximum operating voltage	50V AC
Total rotational angle	300° ±5°
Rotational torque	10 to 40mN·m
Operating life	15,000 cycles
Operating temperature range	-10°C to +70°C
Motor voltage	4 to 6V DC (Standard: 4.5VDC)
Potentiometer rotational speed (sec/300°)	12±3 (4.5V DC)
Maximum operating current	At rotation: 100mA / At end slip: 150mA

Product Line

Number of resistor elements	Mounting direction	Shaft type	Length of the shaft L ₁ (mm)	Total resistance (kΩ)	Resistance taper	Motor print terminal	Minimum order unit (pcs.)		Products No.	Drawing No.
							Japan	Export		
Dual-unit	Horizontal type	Flat	25	100	3B	With	200	200	RK16812MG099	1
Quad-unit					15A	Without			RK16814MGA0K	2

Note

Other varieties are also available. Refer to "Other Specifications" (P.347).

Packing Specifications

Tray

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
200	200	368×527×215

Dimensions

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)
1	<p>16mm size Single-shaft, dual-unit RK16812MG</p>		
2	<p>16mm size Single-shaft, quad-unit RK16814MG</p>		

Refer to P.347 for other specifications.
Refer to P.348 for attached parts.
Refer to P.349 for soldering conditions.

Rotary Motor-driven Type / Other Specifications

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

Basic Motor Specifications

Number of unit	Model	Motor type		Motor voltage	Potentiometer rotational speed	Max. operating current
		Sealed case	Motor printed terminal			
Single-shaft, dual-unit	RK16812MG					
Single-shaft, quad-unit	RK16814MG	Available	Available	4 to 6V DC (Standard: 4.5)	12±3sec/300° (4.5V DC)	At rotation 100mA
Single-shaft, 5-ganged-unit	RK16815MG					At end slip 150mA (4.5V DC)
Single-shaft, 6-ganged-unit	RK16816MG					

Total Resistance Variety

Total resistance (kΩ)	10	20	50	100

Resistance Taper

Resistance taper	15A	3B

Shaft Variety

Unit:mm

L ₁
20
25
30

Shaft shown in full CCW position

Standard Dimensions of Bushing and Fixing Lug

Unit:mm

The self-tapping screw should extend 6.5mm below the mounting surface.

Style of Printed Terminal for Motor

Unit:mm

Note

Marked are specifications recommended by Alps.

[Starting Torque (Starting Force)]

Determined by measuring a torque (operating force) necessary to turn (move) the shaft (lever) for the first time after allowing the test piece to stand for a long period of time. Unless otherwise specified, measurement shall be made at an ambient temperature of 5 to 35°C, and the shaft rotational speed shall be 60° per second and the lever moving speed 20mm per second.

Remarks: To be specified only when required in particular

[Shaft Wobble]

Determined by measuring the amount of deflection at a position of 30mm from the reference surface with a bending moment of 0.1N·m (50mN·m for insulated shaft) applied perpendicularly to the shaft from 180° different directions at a point within 3mm from the place where a smooth cylindrical surface of the shaft ceases to exist. However, if the length of the shaft is less than 30mm, proportional calculation shall be used.

[Allowable Operating Torque for Shaft (Lever)]

With the shaft (lever) placed at the termination of terminal 1, a specified torsional moment (force) shall be applied in that direction for 10 seconds. Next, the shaft (lever) shall be placed at the termination of terminal 3 and a specified torsional moment (force) shall be applied similarly, to check the control part and other related sections for any deformation or breakage.

[Push-pull Strength (Lever Push-pull Strength)]

A specified force shall be applied in the axial direction of the shaft (lever) for 10 seconds to check the control part and other sections for any deformation or breakage and for operating condition.

Resistance Taper

[Resistance Taper]

With the shaft (lever) placed in the specified position, resistance taper shall be determined by measuring the voltage between the specified terminals (between terminals 1 and 2 or between terminals 2 and 3) and calculating the percentage in reference to the voltage between terminals 1 and 3.

Reference: Standard resistance tapers in reference to rotational angles (travels) are as shown below.

