## ■ 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 (Standerd: 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	Mounting	Shaft	Length of the shaft	Total resistance	Resistance	Motor print	Minimum ord	er unit (pcs.)	Products No.	Drawing
resistor elements	direction	type	L <sub>1</sub> (mm)	(k Ω)	taper	terminal	Japan	Export	Floudets No.	No.
Dual-unit	Horizontal				3B	With			RK16812MG099	1
Quad-unit	type	Flat	25	100	15A	Without	200	200	RK16814MGA0K	2

#### Note

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

# Packing Specifications

# Tray

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

Din	mensions		Unit:mm
No.	Photo	Style	PC board mounting hole dimensions (Viewed from mounting side)
1	16mm size Single-shaft, dual-unit RK16812MG	(44.9) 25 (18.1) 23.25 7 12 (18.1) 23.25 7 12 (18.1) 23.25 7 12 (18.7) 25 18.7 (18.7) 25 18.7 (18.7) 25 (18.7) 2	2-2.6×1.2 square hole  Mounting surface  19.7  15.5  7.5  COM  2-01.2 hole  R1 ① ② ③  R2 1 2 3
2	16mm size Single-shaft, quadunit RK16814MG	(49.25) 25 25 18.7 18.7 18.7 18.7 18.7 18.7 18.7 18.7	2-2.6×1.2 square hole  Mounting surface  12.3 7.5 7.5  12.3 7.5 7.5  12.3 7.5 7.5  12.3 7.5 7.5  13.3 12.3 12.3 12.3 12.3 12.3 12.3 12.3



# 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	Potentiometer	Max. operating
Training of anne	1110001	Sealed case	Motor printed terminal	voltage	rotational speed	current
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	Available	Available			At end slip 150mA (4.5V DC)
Single-shaft, 6-ganged-unit	RK16816MG					(57 25)

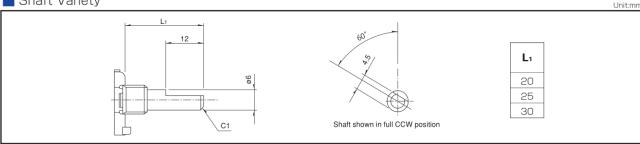
### ■ Total Resistance Variety

Total resistance ( $k\Omega$ )	10	20	50	100

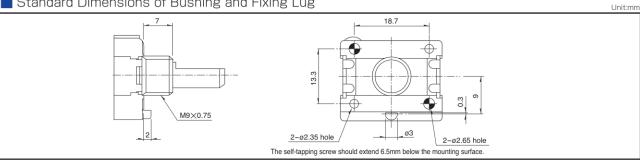
#### Resistance Taper

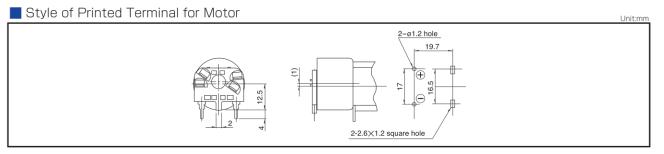
Resistance taper 15A 3B	Resistance taper	I Ib A	ЗВ
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# Shaft Variety



Standard Dimensions of Bushing and Fixing Lug





Note

Marked are specifications recommended by Alps.

# Measurement and Test Methods

#### (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  $35^{\circ}$ C, and the shaft rotational speed shall be  $60^{\circ}$  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.

