

Customer: \_\_\_\_\_

No. KX-2003-6501

Date: Jun. 12, 2003

Attention: \_\_\_\_\_

Your ref. No: \_\_\_\_\_

Your Part. No: \_\_\_\_\_

# SPECIFICATIONS

ALPS';

MODEL RK09K1130BGM  
( 10k A )

Spec. No. : \_\_\_\_\_

Sample No. : FO734353M

RECEIPT STATUS
RECEIVED
By <u>Date</u> _____
<u>Signature</u> _____
<u>Name</u> _____
<u>Title</u> _____

ALPS ELECTRIC CO., LTD.

HEAD OFFICE  
1-7, YUKIGAYA-OHTSUKA-CHO,  
OHTA-KU, TOKYO 145-8501 JAPAN

DSG'D M. Sato

APP'D S. Sato

Sales \_\_\_\_\_

## SPECIFICATIONS

1. THIS SPECIFICATIONS APPLY TO RK09K1130BGM POTENTIOMETER.

2. CONTENTS OF THIS SPECIFICATIONS.

F0734353M  
K091C0Z06

3. MARKING

· MARKING ON ALL UNITS  
DATE CODE, RESIST. VALUE, TAPER

4. REMARKS

· NOTES

· METHOD OF MARKING  
TO BE STAMPED WITH BLACK INK OR LASER MARKING  
· This unit uses polycarbonate. To be careful for using this unit in such violent gas atmospheric condition as ammonia, amine, alkaline aqueous solution, aromatic hydrocarbon, keton, ester, alkyl hydrocarbon, etc.

· CAUTION

Regardless of the suggested applications of these products being introduced in the specifications, when using them for equipment and devices requiring a high degree of safety, respective manufacturers will please preserve safety of the planned equipment and devices by providing necessary protective circuits and redundancy circuits and reconfirm if safety is being duly preserved.

Products being introduced in the specifications have been designed and manufactured for applications to ordinary electronic equipment and devices such as the AV equipment, electric home appliances, office machines and communications equipment. Consequently, when employing these products for applications requiring a high degree of safety and reliability such as the medical equipment, aviation and aircraft equipment, space equipment and burglar alarm equipment, the using manufacturers will please thoroughly study the proprieties of these products for the planned applications.

Although we are exerting our best efforts to maintain the quality of these products, we cannot guarantee that they will never cause short circuiting and open circuitry. Therefore, when designing an equipment or device with which the priority is given to the safety, you will please carefully study the influences to the whole equipment of a single function failure of Potentiometers and Encoders in advance to make out a fail-safe design providing.

# SPECIFICATIONS

## ELECTRICAL

1. Total resistance : 10k  $\Omega$   $\pm$ 20%
2. Rated power : 0.05 W
3. Rated voltage :

The rated voltage shall be the voltage of D.C. or A.C. (commercial frequency, effective value) corresponding to the rated power (dissipation), and be obtained from the following formula. When the obtained rated voltage exceeds the maximum working voltage given in the following, however, the maximum working voltage of the following shall be the rated voltage.

$$E = \sqrt{P \cdot R} \text{ (V)}$$

Where E : Rated voltage (V)  
 P : Rated power(dissipation) (W)  
 R : Nominal total resistance ( $\Omega$ )

Maximum working voltage : 50 V A.C. , 20 V D.C.

4. Residual resistance between terminals  
 between term. 1&2, term. 2&3 : 300 $\Omega$  max.
5. Sliding noise : Less than 100 mV measured by method of JIS C 6443.
6. Insulation resistance : Greater than 100 M $\Omega$  measured by D.C. 250V.
7. Withstand voltage: More than 1 minute with an application of A.C. 250 V.
8. Taper : A

## MECHANICAL

1. Overall rotational angle : 280°  $\pm$ 5°
2. Operation torque : 1~8mN·m (Rotational speed 60°/sec.)
3. Shaft end stop strength : No damage with an application of 0.3N·m.
4. Starting torque : 10mN·m MAX.
5. Resistance to soldering heat :  
 After soldering (Less than 300°C and quicker than 3 seconds) there shall be no evidence of poor contact between resistance element and terminals, or any physical damages as a result of the test.
6. Play of shaft :  
 The resistor shall be mounted by soldering the mounting legs on the panel. Then a side thrust of 25mN·m at the end of the shaft shall be applied. then the total play of the shaft shall not exceed 0.8 x L / 20 mm p-p.  
 (L:Shaft length)
7. Inclination of shaft :  
 The eccentricity of the root of shaft shall not exceed 0.35mm against the center of the mounting position.
8. Eccentricity of shaft :  
 The inclination of shaft shall be within 0.35mm to the center of shaft, which is parallel to the mounting surface.
9. Robustness of shaft against end thrust :  
 The shaft shall withstand against end thrust of 50N for 3 seconds.
10. Robustness of shaft against side thrust :  
 The shaft shall withstand against side thrust of 40N for 3 seconds on the end of the shaft at right angles to the axis of the shaft after mounting the resistor by soldering.

## ENDURANCE

1. Rotational life : 5.000 cycles min.

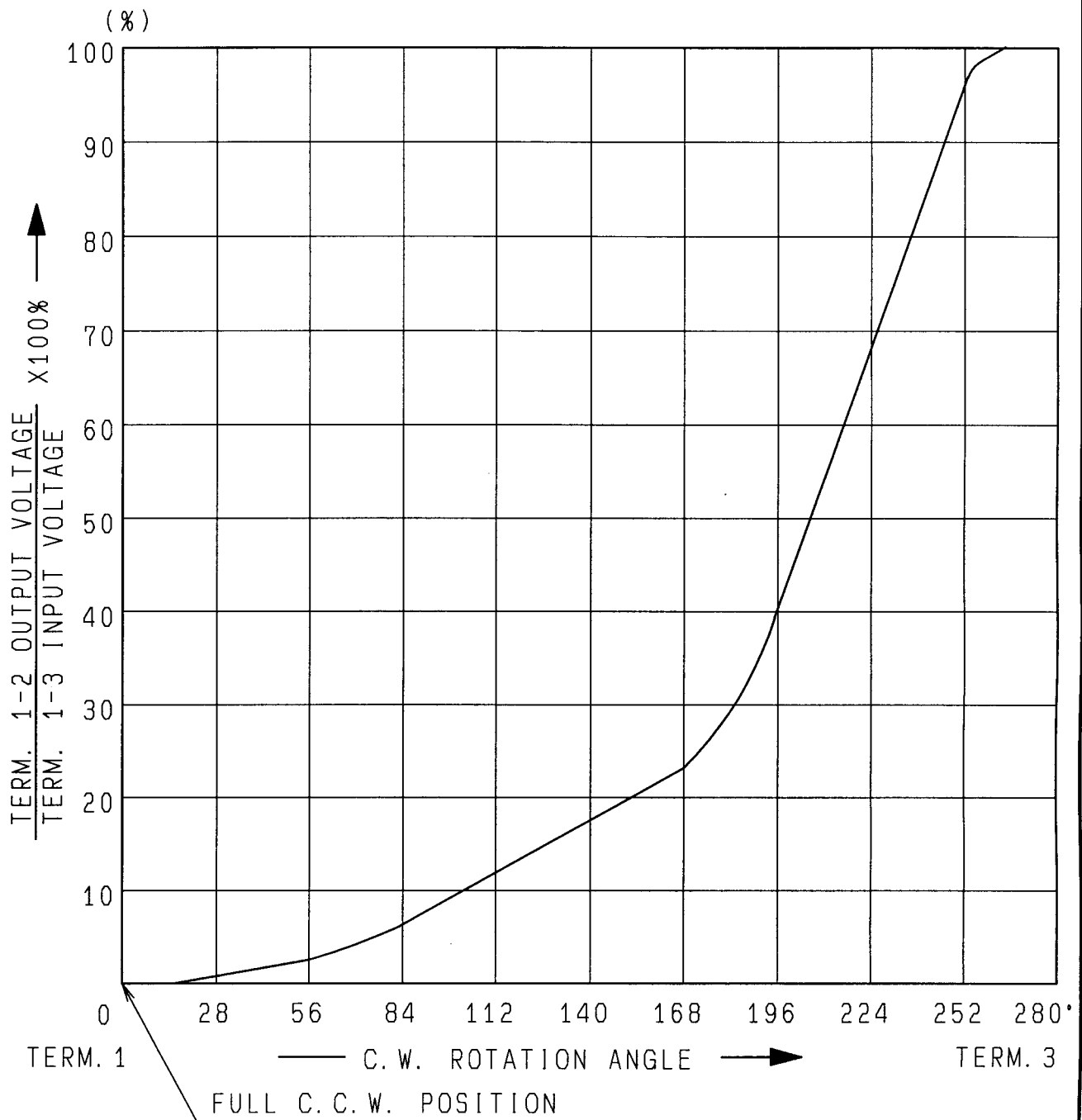
## NOTE

1. The items except above mentioned items shall meet or exceed JIS C 6443.
2. Operating temperature : -10°C~+60°C, 3. Storage temperature : -30°C~+70°C.

					<b>ALPS ELECTRIC CO., LTD.</b>			
					APPD.	CHKD.	DSGD.	TITLE
					Sep. 13. '96	Sep. 13. '96	Sep. 13. '96	
					S. Aizawa	M. Satoh	Y. Saitoh	DOCUMENT NO.
SYMB	DATE	APPD	CHKD	DSGD	F 0 7 3 4 3 5 3 M			

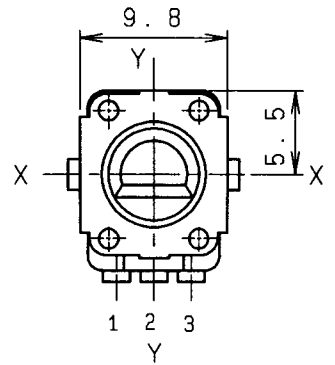
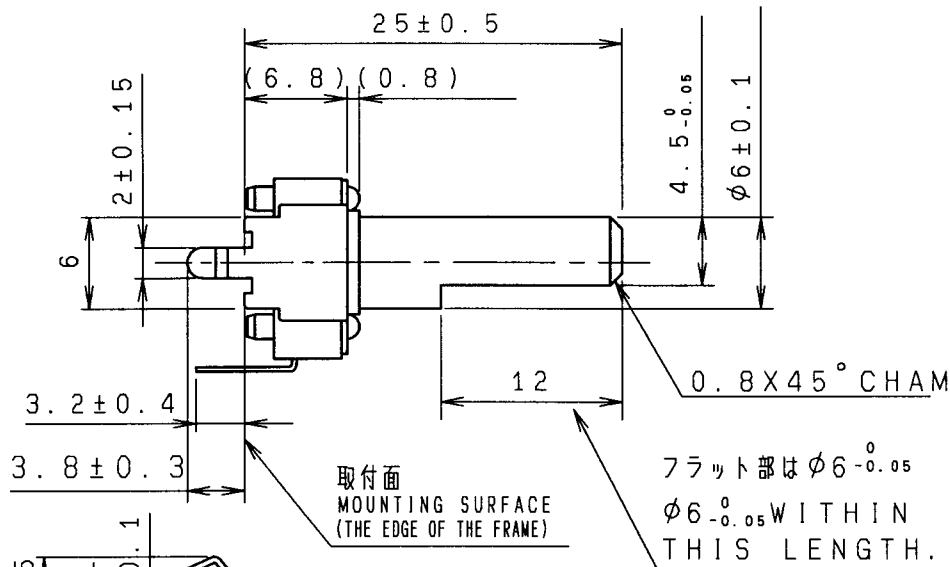


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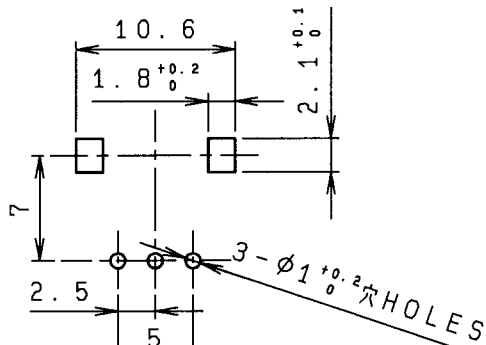
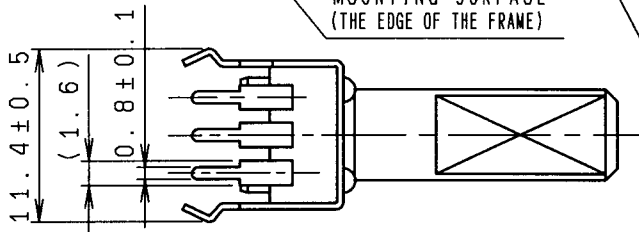


AT 140° C.W. SHAFT ROTATION FROM FULL C.C.W. POSITION VOLTAGE PERCENT SHALL FALL WITHIN THE LIMITS OF 10~25 PERCENT.

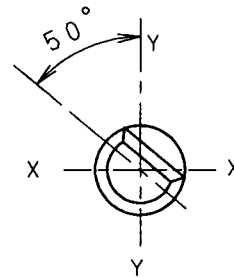
					APPD.	CHKD.	DSGD.	NAME
					Jul. 13. '93	Jul. 13. '93	Jul. 13 '93	RESISTANCE TAPER (A)
					K. Magami	K. Sasaki	K. Suzuki	DOCUMENT NO.
SYMB	DATE	APPD	CHKD	DSGD				F0734353M



軸はセンター位置を示す。  
SHAFT SHOWN IN  
CENTER POSITION.

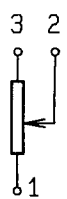


端子取付寸法図(挿入側より見た図)  
(許容差±0.1)  
MOUNTING HOLE DETAIL  
(TOLERANCE±0.1)  
VIEWED FROM MOUNTING SIDE



軸は反時計方向に回し切った状態を示す。  
SHAFT SHOWN IN  
FULL C.C.W. POSITION.

回路図  
CIRCUIT



製品質量: 1.8 g  
NET WEIGHT

指定なき部分の許容差 TOLERANCES UNLESS OTHERWISE SPEC	
$L \leq 10$	±0.3
$10 < L < 100$	±0.5
$100 \leq L$	±0.8
角度 ANGULAR DIMENSION	±5°

			SHAFT COLOR : BLACK(B)	
PART NO.	NAME	MATERIAL NAME / CODE	FINISH	
<b>ALPS ALPS ELECTRIC CO., LTD.</b>				
DSGD. 1-設計1番 Y. Saitoh 96-09-13			SCALE 2 : 1	NO. F0734353M
CHKD. Y. Satoh 96-09-13				TITLE 9形1軸単連絶縁軸VR
APPD. S. Aizawa 96-09-13			UNIT mm	DOCUMENT NO. F01
SYMB	DATE	APPD	CHKD	DSGD
K091C0Z06				

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[PTMBL1912A](#) [RK09K111F15C0B104](#) [RK09K1130D62](#) [RK50114A0001](#) [SCDG2A0101](#) [SPEF120100](#) [SSSS928500](#) [SSGM680200](#)  
[EC11E09244BS](#) [SKHLLAA010](#) [UE200013](#) [SCJB1B0301](#) [RD1010030A](#) [EC10E1260507](#) [RK27112A0-F20-C0-V503](#) [RK09L124000Z](#)  
[RD7081015A](#) [RDCC010002](#) [RK09L1120A2S](#) [SRBM140700](#) [RS6011Y50K](#) [RK0972210-F30-31-B103](#) [RD1Y50010A](#) [RD1030211A](#)  
[SSSS213800](#) [EC35A0930401](#) [RS30H11AA009](#) [SPVQ820502](#) [RK14K12C0A0T](#) [RS45112-0620-C0-P1-A203](#) [RK09K1110B1V](#)  
[RK11K1140A3L](#)