

Customer: ALGE GERMAN DISTRIBUTER

No. KK-2005-9459

Date: Jun. 23, 2005

Attention:

Your ref. No.:

Your Part No.: 401618

## SPECIFICATIONS

ALPS' ;

MODEL: RK2711210A03  
( 10kMN )

Spec. No.:

Sample No.: E 3 8 7 0 3 5 2 0

### RECEIPT STATUS

RECEIVED

By Date

Signature

Name

Title

**ALPS**  
ALPS ELECTRIC CO., LTD.

Head Office

1-7, Yukigaya-otsuka-cho, Ota-ku, Tokyo, 145-8501 Japan  
Phone, +81(3)3726-1211

DSG'D

APP'D

ENG. DEPT. DIVISION

Sales

24678

Q1003#03A (EA)

# S P E C I F I C A T I O N S

1. THIS SPECIFICATIONS APPLY TO RK2711210A03 POTENTIOMETER.

2. CONTENTS OF THIS SPECIFICATIONS.

W38703520

K272A004D

3. MARKING

- MARKING ON ALL UNITS

DATE CODE, RESIST. VALUE, TAPER

4. REMARKS

- FURNISH PACKAGE

NUT:1 WASHER:1

- NOTES

• Silver printed patterns are coated with carbon as a protection against sulphuration.

- 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.

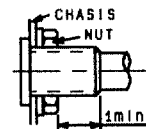
# SPECIFICATIONS

## ELECTRICAL

1. Total resistance : 10k $\Omega$ (nominal)  $\pm$  20%
2. Rated voltage :  
The rated voltage shall be the voltage of A.C. (commercial frequency, effective value)  
Maximum working voltage : 30V A.C. (A.C. Use only )
3. Resistance taper : MN
4. Residual resistance between terminals  
between terminal 1 & 2 : 20 $\Omega$  max.  
between terminal 2 & 3 : 20 $\Omega$  max.
5. Sliding noise : Less than 47mV ( Measured by JIS C 6443. )  
(Neglected a impulsive noise at the c.w. and c.c.w. ends of position)
6. Insuration resistance : More than 100M $\Omega$  at 500V D.C.
7. Withstand voltage : 500V A.C. for 1 minute.
8. Gang error : Not specified.

## MECHANICAL

1. Total rotational angle : 300°  $\pm$  3°
2. Rotational torque : 8~35mN·m ( Rotational speed : 60°/sec )
3. Stopper strength : No damage with an application of 0.9N·m.
4. Resistance to soldering heat :  
After soldering ( Less than 350 $^{\circ}$ C and within 5sec ), there shall be no evidence of poor contact between resistance element and terminal, or any physical damages as a result of the test.
5. Bushing nut tightening strength : Tightening torque  
to be no greater than 1.5N·m.  
Pay attention to tighten as shown right.  
Otherwise, the strength may not be assured.
6. Push / pull strength :  
No damages with an application of push or pull force 100N for 10 sec.



## ENDURANCE

1. Rotational life : 15,000 cycles min.

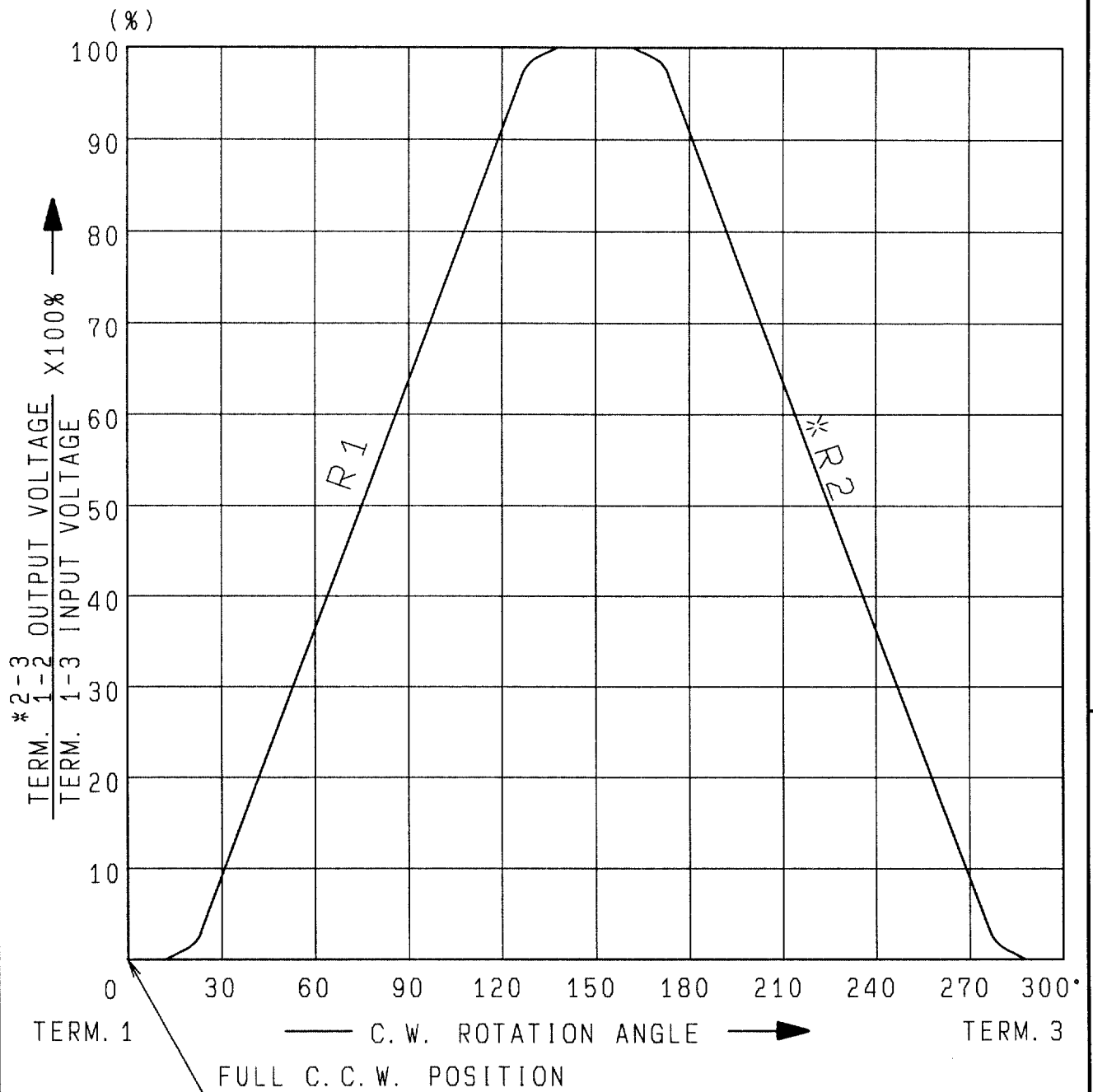
## NOTE

1. The items except above mentioned items shall meet or exceed JIS C 6443.
2. This type is protected against sulfides.

					<b>ALPS ELECTRIC CO., LTD.</b>			
					APPD.	CHKD.	DSGD.	TITLE
					NOV. 22, '96	NOV. 22, '96	NOV. 22, '96	W38703520
					Y. Yoshioka	M. Satoh	Y. Saitoh	DOCUMENT NO.
SYMB	DATE	APPD	CHKD	DSGD				



ALPS ELECTRIC CO., LTD  
1-7 YUKIGAYA OTSUKA-CHO OTA-KU TOKYO JAPAN



(R1)  
AT  $75 \pm 3^\circ \text{C.W.}$  SHAFT ROTATION FROM FULL C.C.W. POSITION VOLTAGE PERCENT SHALL FALL WITHIN THE LIMITS OF 40-60 PERCENT.  
AT  $150^\circ$  ----- 98-100%

\*(R2)  
AT  $75 \pm 3^\circ \text{C.C.W.}$  SHAFT ROTATION FROM FULL C.W. POSITION VOLTAGE PERCENT SHALL FALL WITHIN THE LIMITS OF 40-60 PERCENT.  
AT  $150^\circ$  ----- 98-100%

					APPD.	CHKD.	DSGD.	NAME
					Nov. 15, '96		Nov. 15, '96	RESISTANCE TAPER ( MN )
					S. Sasaki		K. Tuunan	DOCUMENT NO.
SYMB	DATE	APPD	CHKD	DSGD				W38703520

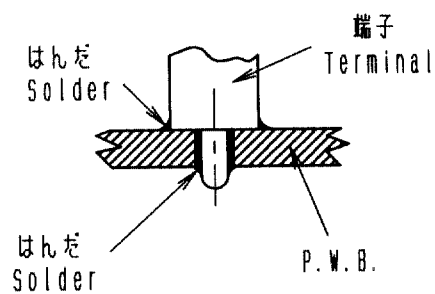


< はんだ付け時の注意事項 >

図のようにP.W.B.の上面に はんだ付けをする配線は、  
お避け下さい。

Caution for soldering

Please avoid soldering on upper surface of P.W.B. as shown



					<b>ALPS ELECTRIC CO., LTD.</b>			
					APPD.	CHKD.	DSGD.	TITLE
					Apr. 14, '93	Apr. 14, '93	Apr. 14, '93	W38703520
					S. Aizawa	M. Satoh	Y. Saitoh	DOCUMENT NO.
SYMB	DATE	APPD	CHKD	DSGD				