

Customer: ALPS EUROPE DISTRIBUTION

No. AD-2007-9014

Date: Sep. 13, 2007

Attention:

Your ref. No.:

Your Part No.:

SPECIFICATIONS

ALPS';

MODEL: RK097111020U
(5kA)

Spec. No.:

Sample No.: F 4 6 8 3 9 6 6 M

RECEIPT STATUS

RECEIVED

By Date

Signature

Name

Title

ALPS
ALPS ELECTRIC CO., LTD.

DSG'D

M. Sato

APP'D

S. Sato

ENG. DEPT. DIVISION

Sales

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

B6523

01003#03A (EA)

SPECIFICATIONS

1. THIS SPECIFICATIONS APPLY TO RK097111020U POTENTIOMETER.

2. CONTENTS OF THIS SPECIFICATIONS.

F4683966M

K091K0019

3. MARKING

• MARKING ON ALL UNITS

DATE CODE, RESIST. VALUE, TAPER

4. REMARKS

• FURNISH PACKAGE

NUT:1 WASHER:1

• This product complies with RoHS.

• CAUTION

There is a possibility that might be affected by contact resistance of resistive element and wiper in case of low impedance of output side in voltage regulation circuit.
For this reason, we require that you adjust to impedance of output side more than 100 times of total resistance.

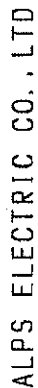
Regardless of the suggested applications of these products being introduced in the specifications, when using them for equipment and devices requiring a high degree of safety, respective manufacturers will please preserve safety of the planned equipment and devices by providing necessary protective circuits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

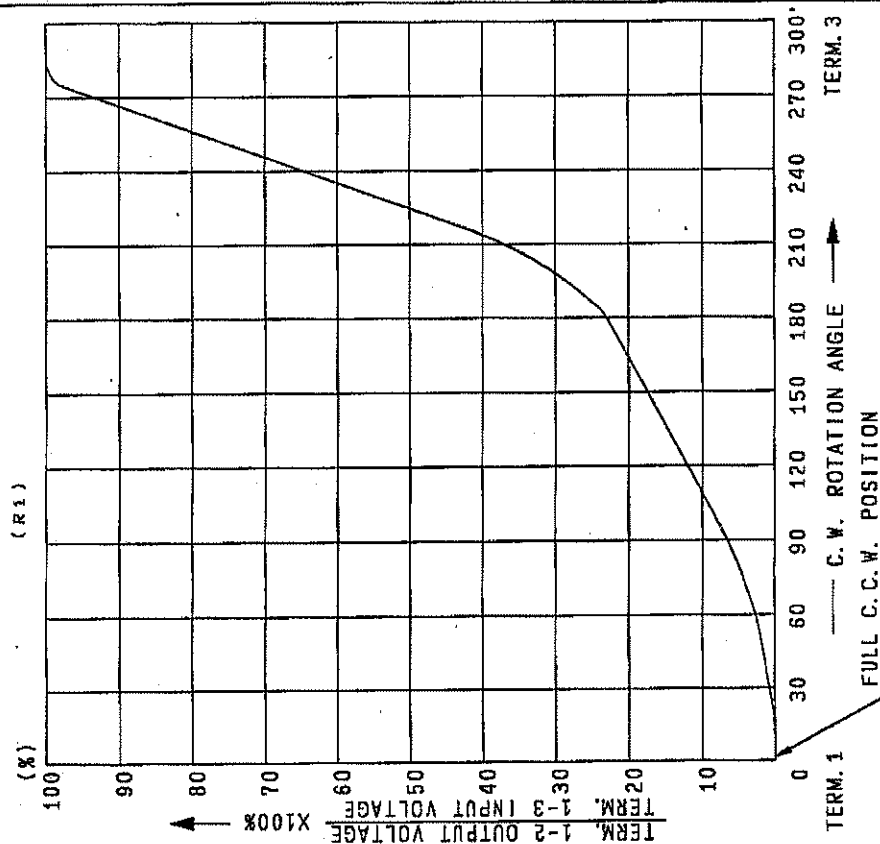
Although we are exerting our best efforts to maintain the quality of these products, we cannot guarantee that they will never cause short circuiting and open circuitry.
Therefore, when designing an equipment or device with which the priority is given to the safety, you will please carefully study the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

ELECTRICAL		Single shaft (R1)	
1. Total resistance:	5 k $\pm$ 20%		
2. Rated power:	0.05W		
3. Rated voltage:	Please refer to the attached.		
4. Resistance taper:	Please refer to the attached.		
5. Tap position:			
6. Tap resistance between terminals:			
7. Residual resistance between terminals:	1 $\pm$ 2.2k $\pm$: 20 Ω max.		
8. Sliding noise : (Measured by JIS C 6443)	Less than 100mV		
9. Insulation resistance :	More than 100 M Ω at 250V D.C.		
10. Withstand voltage:	300V A.C. for 1 minute.		
11. Gang error :			
12. Switch rating: (Resistor load)			
13. Switch contact resistance:			
14. Circuit:			
MECHANICAL			
1. Total rotational angle :	300 $^{\circ}$ $\pm$ 5 $^{\circ}$		
2. Rotational torque: (Rotational speed 60 $^{\circ}$ /sec.)	2 $\sim$ 25mN $\cdot$ m.		
3. Stopper strength :	No damage with an application of 0.5N $\cdot$ m min.		
4. Resistance to soldering heat :	Please refer to the attached.		
5. Bushing nut tightening strength :	Tightening torque to be no greater than 1N $\cdot$ m. Pay attention 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.		
7. Shaft wobble : (Apply the moment of 50mN $\cdot$ m at the point of 30mm from mounting surface)	0.6 XL/30mm D-D max. (L: Shaft length) (If the shaft length is less than 30mm, the value shall be calculated proportionally.)		
8. Operation force of shaft:			
9. Click position :			
10. Click torque:			
11. Rotation play at the click position:			
12. Contact arrangement :			
13. Switching angle :			
14. Switch operation torque :			
ENDURANCE			
1. Rotational life :	More than 15,000 cycles.		
NOTES			
1. The items except above mentioned items shall meet or exceed JIS C 6443.			
2. This type is protected against sulfides.			
3. Operating temperature range : -20 $^{\circ}$ C to +70 $^{\circ}$ C			
4. Storage temperature range : -40 $^{\circ}$ C to +85 $^{\circ}$ C			
TITLE		SPECIFICATIONS	
SYMB		DATE	APPROVED
CHD.		CHD.	DSGD.
MAY. 05. '94		MAY. 05. '94	MAY. 05. '94
R. ARASAKI		M. ENDO	T. YAMAGUCHI
NO.		F 4683966M	

ALPS ELECTRIC CO., LTD.



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



AT 150° C.W. SHAFT ROTATION FROM FULL C.C.W. POSITION VOLTAGE PERCENT SHALL FALL WITHIN THE LIMITS OF 10-25 PERCENT.

SYMB	DATE	APPD	CHGD	DSGD	APPD.	CHKD.	DSGD.	NAME	K09-A01
					APR. 23 '44	APR. 23 '44	APR. 23 '44	RESISTANCE TAPER	
					T. HAYHILL	S. SUGILL	T. SUGILL	DOCUMENT NO.	F 4683966M

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.

$$E = \sqrt{p \cdot g}(v)$$

where E : Rated voltage (V)

P : Rated power (dissipation) (W)

R : Nominal total resistance (Ω)

Maximum working voltage : 50 V A.C. ; 10 V D.C.

Resistance to soldering heat

ance to soldering heat
There shall be no evidence of poor contact between
resistance element and terminals, or any physical
damages as a result of soldering.

Buljapinos di-

Condition of soldering :
Soldering shall be certified with following condition.

substrates to be soldered :

Cooper clad laminated phenol board in one surface of

Copper clad laminated phenol board in one surface of 1-6 mm thickness.

1.6 mm thickness.
Solder flux :

Solder flux : Flux of 60 specific weight in bubbling type solder

Flux of 0.82 specific weight in bubbling type solder fluxcoating apparatus shall be used and bubbling surface

fluxcoating apparatus shall be used and bubbling surface height shall be defined substantially as belt thickness of

height shall be defined substantially as halt thickness of

substrate, not flow in on substrate surface

Flux shall not flow up on substrate surface.

Preheating : surface temperature of substrate shall be settled within

surface temperature of substrate shall be bottled within 100°C in 3 minutes

100 C in 2 minutes.
on solid :
:

To be performed in $260 \pm 5^\circ \text{C}$, 5 ± 1 sec.

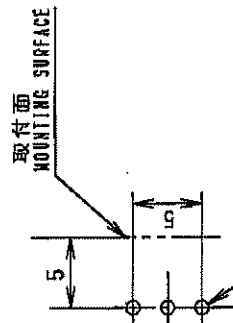
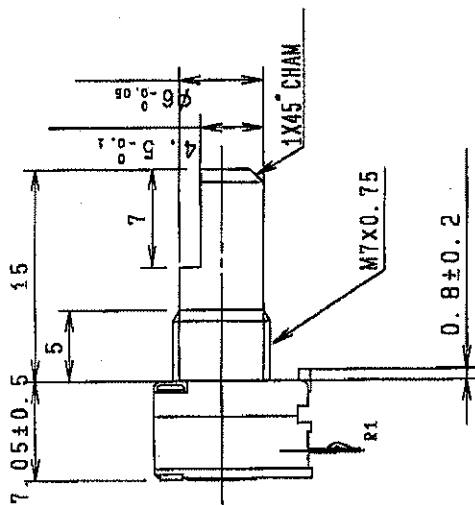
Please use the above process only 1 or 2 times.

Manuál soldering

To be performed in 3 seconds within 350°C.

SYMB	DATE	APPD	CHSD	DSGD	APPL.	CHED.	DSGD.	NAME
					MAY 23, '94	MAY 23, '94	MAY 23, '94	
					P. ALZIEBE	M. EAGO	T. YOUNGQUIST	DOCUMENT NO.

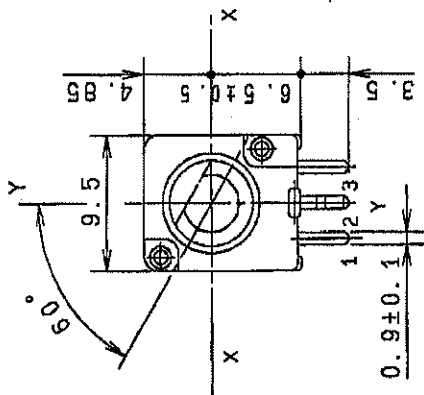
NOTES
 BUSHING MATERIAL ----- ZINC ALLOY DIE CASTING
 SHAFT MATERIAL ----- ALUMINUM



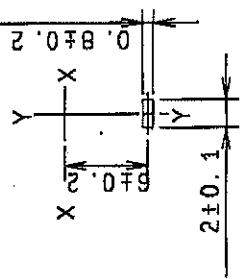
軸子取付寸法図 (新入側より見た図) 3- $\phi 1.0 \pm 0.1$ 穴 HOLES

指定なま部分の許容差
 TOLERANCES UNLESS OTHERWISE SPEC
 L ≤ 10 ± 0.3
 10 < L ≤ 100 ± 0.5
 100 ≤ L ± 0.8
 角度 ± 5°
 ANGULAR DIMENSION

重量 3.5g



LOCATING LUG DETAIL
 シャフト止めの詳細図



上図は軸を反時計方向に
 回しつけた状態を示す。
 SHAFT SHOWN IN
 FULL CCW POSITION

ALPS ELECTRIC CO., LTD.

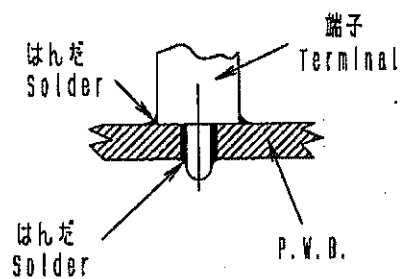
DSGN. 設計者 設計日	SCALE	F4683966M
T. YAMAGUTI '94-05-23	X	
CHKD.		
M. ENDO '94-05-23		
APPD.		
R. ARASAWA '94-05-23		
SYMB	DATE	APPD
CHGD	USGD	CHKD
UNIT	m	m
DOCUMENT NO.		K091K0019
TITLE		9形1軸受 VR 軸止図

< 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



					ALPS ELECTRIC CO., LTD.			
					APPD.	CHKD.	DSGD.	TITLE
					Apr. 14, '93	Apr. 14, '93	Apr. 14, '93	F 4 6 8 3 9 6 6 M
					S. Aizawa	M. Satoh	Y. Saitoh	DOCUMENT NO.
SYMB	DATE	APPD	CHKD	DSGD				