

Customer:

No. KX-97-1799

Attention:

Date: Feb. 19, 1997

Your ref. No:

Your Part. No: 29 0024

# SPECIFICATIONS

ALPS:

MODEL . 29 0024

Spec. No.:

Sample No. : W1011765M

RECEIPT STATUS

RECEIVED

By. Date

Signature

Name

Title

ALPS. ELECTRIC CO., LTD.

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

DSG'D H. Kimura

APP'D Y. Ohya

ENG. DEPT. DIVISION

Sales

SPECIFICATIONS

No. KX-97-1799

1. THIS SPECIFICATIONS APPLY TO RROK1130 POTENTIOMETERS.

2. CONTENTS OF THIS SPECIFICATIONS.

W101765A  
R0910024G

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 atmosphere condition as ammonia, amine, alkaline aqueous solution, aromatic  
hydrocarbon, keton, ester, alkyl hydrocarbon, etc.

# SPECIFICATIONS

## ELECTRICAL

1. Total resistance : 100k $\Omega$   $\pm$ 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 : B

## MECHANICAL

1. Overall rotational angle : 280 $^{\circ}$   $\pm$ 5 $^{\circ}$
2. Operation torque : 10~80 gf·cm
3. Shaft end stop strength : 3 Kgf·cm MIN.
4. Starting torque : 100 gf·cm MAX.
5. Resistance to soldering heat :  
 After soldering (less than 300 $^{\circ}$ 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, and a side thrust of 250 gf·cm at the end of the shaft shall be applied, then the total play of the shaft shall not exceed 0.5  $\times$  L / 20 mm  $\phi$ - $\phi$ .
7. Eccentricity of shaft :  
 The eccentricity of the root of shaft shall not exceed 0.35mm against the center of the mounting position.
8. Robustness of shaft against end thrust :  
 The shaft shall withstand against end thrust of not less than 5 Kgf for 3 seconds.
9. Robustness of shaft against side thrust :  
 The shaft shall withstand against side thrust of not less than 4 Kgf·cm 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

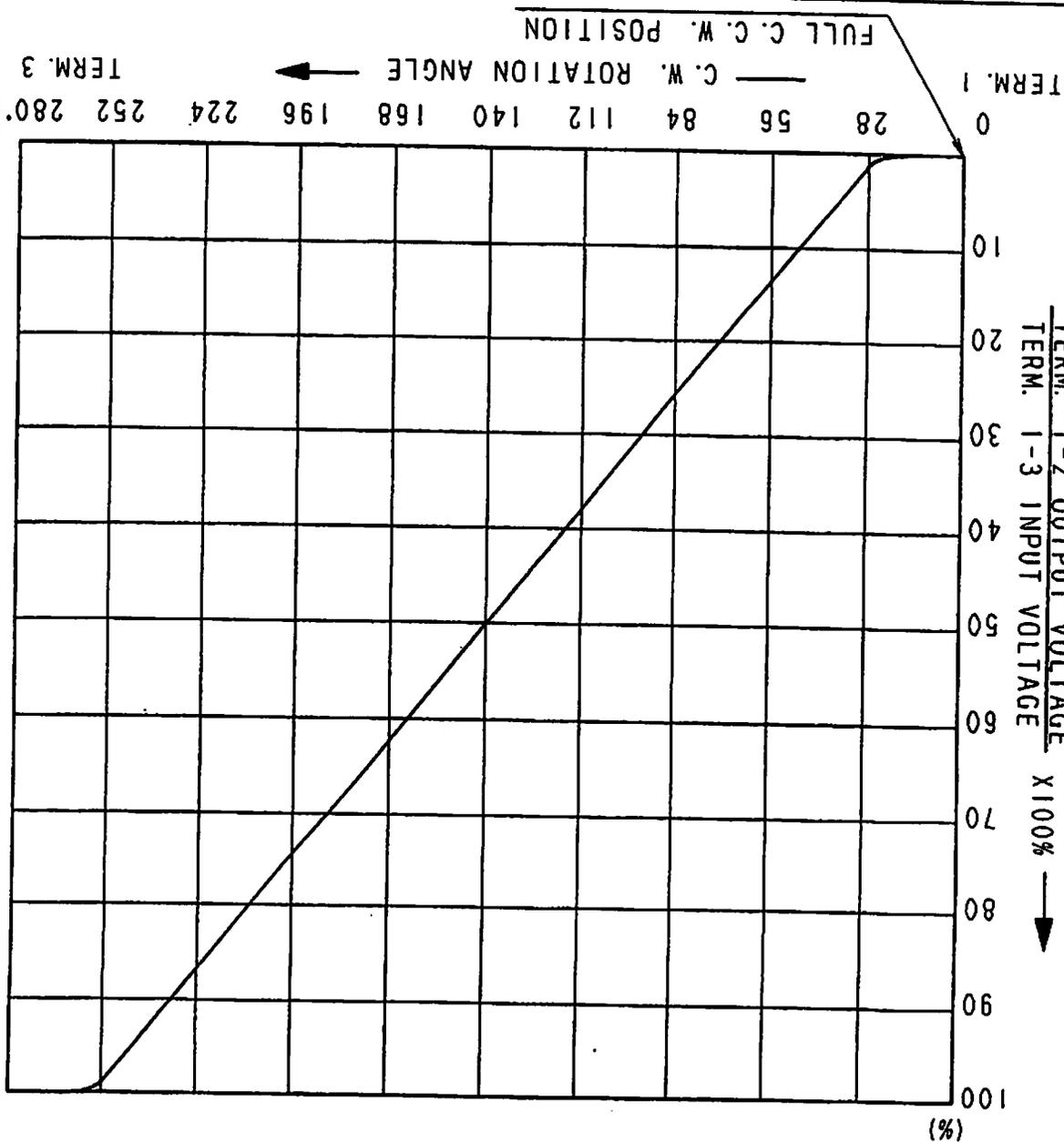
1. The items except above mentioned items shall meet or exceed JIS C 6443.
2. Operating temperature : -10 $^{\circ}$ C ~ +60 $^{\circ}$ C. 3. Storage temperature : -30 $^{\circ}$ C ~ +70 $^{\circ}$ C.

|  |                     |                     |                     |              |
|--|---------------------|---------------------|---------------------|--------------|
|  <b>ALPS ELECTRIC CO., LTD.</b> |                     |                     |                     |              |
|  |                     |                     |                     |              |
|  | APPD.               | CHKD.               | DSGD.               | TITLE        |
|  | <i>Sep. 13. '96</i> | <i>Sep. 13. '96</i> | <i>Sep. 13. '96</i> |              |
|  | <i>S. Aizawa</i>    | <i>M. Satoh</i>     | <i>Y. Saitoh</i>    | DOCUMENT NO. |
| SYMB   | DATE                | APPD                | CHKD                | DSGD         |
|  |                     |                     |                     | W1011765M    |

KX09

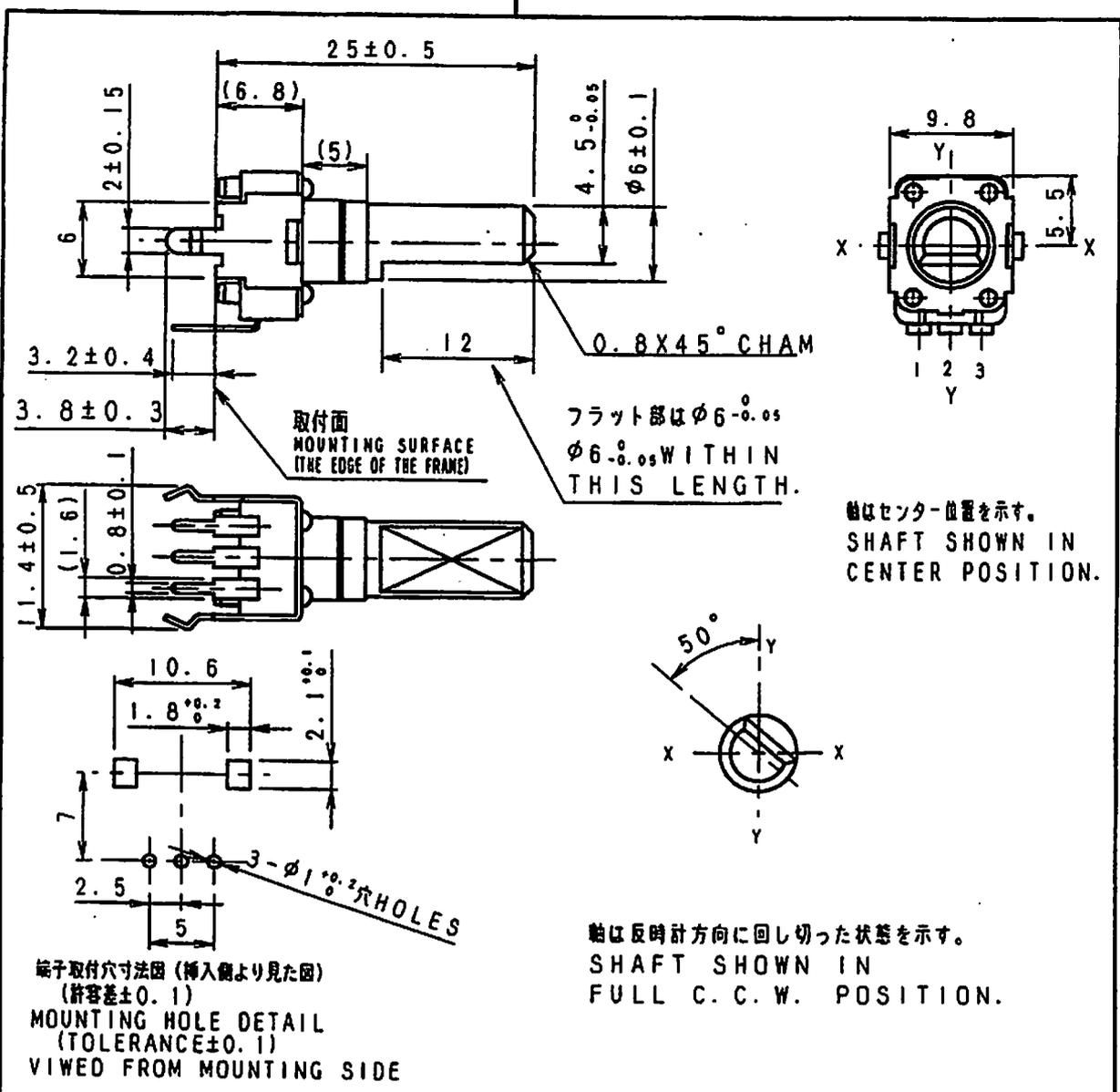
|      |      |      |      |      |              |              |              |                        |
|------|------|------|------|------|--------------|--------------|--------------|------------------------|
| SYMB | DATE | APPD | CHKD | DSGD | APPO.        | CHKD.        | DSGD.        | NAME                   |
|      |      |      |      |      | Jan. 13, '93 | Jan. 13, '93 | Jan. 13, '93 | RESISTANCE TAPER (B)   |
|      |      |      |      |      | K. Masami    | K. Sasaki    | K. Suzuki    | DOCUMENT NO. W1011765M |

AT 140° C. W. SHAFT ROTATION FROM FULL C. W. POSITION VOLTAGE PERCENT SHALL FALL WITHIN THE LIMITS OF 40~60 PERCENT.



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





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

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

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.

製品重量: 1.8 g  
 NET WEIGHT

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

|                                |      |                      |                            |                  |           |
|--------------------------------|------|----------------------|----------------------------|------------------|-----------|
|                                |      |                      | SHAFT COLOR<br>: BLACK (B) |                  |           |
| PART NO.                       | NAME | MATERIAL NAME / CODE | FINISH                     |                  |           |
| <b>ALPS ELECTRIC CO., LTD.</b> |      |                      |                            |                  |           |
| DSGD. I-2H12                   |      |                      | SCALE                      | W1011765M        |           |
| Y. Saitoh 96-09-13             |      |                      | 2 : 1                      |                  |           |
| CHKD.                          |      |                      | TITLE                      | 9形1軸単速絶縁軸VR      |           |
| Y. Satoh 96-09-13              |      |                      |                            |                  |           |
| APPD.                          |      |                      | UNIT                       | DOCUMENT NO. F18 |           |
| SYMB                           | DATE | APPD                 | CHKD                       | DSGD             | K091C0Z4G |
|                                |      | S. Aizawa            |                            | 96-09-13         |           |