Customer :

No.

Date :

Attention :

Your ref. No. :

Your Part No. :

SPECIFICATIONS

ALPS' ;

RK27112MC009A

MODEL: (10kA×2)

Spec. No. : 4K272AMS-1

Fig.No. : K272AMC002

REMARKS:

MARKING

ON ALL UNITS

DATE CODE
RESIST, VALUE
TAPER
TRADE MARK
JAPAN

FURNISH PACKAGE

NUT	1
WASHER	1

ALPS ELECTRIC CO., LTD.

HEAD OFFICE

1-7, YUKIGAYA-OHTSUKA-CHO,

OHTA-KU, TOKYO 145 JAPAN

DSG'D T. Yamaguchi

APP'D M. Satoh

ENG. DEPT. WAKUYA DIVISION

CLASS.NO. | TITLE: SPECIFICATION

Feature

This is a potentiometer with D.C. magnet motor and it is adjustable by both manual shaft and motor.

Temperature for operating and storage

1.Dimensions : See attached drawing
2.Operating temperature : -10℃～+70℃
3.Storage temperature : -20℃～+80℃
4.Motor : D.C. magnet motor (With 6V Disk Varistor)

Mechanical specifications

1.Operation : manual operation and motor drive
2.Total rotational angle : 300° ± 5°
3.Rotational speed : 12±3 sec/300° (at 3V D.C. applied to motor)
4.Direction of rotation : C.W. rotation at normal polarity. (When the potentiometer is looked at from the shaft side.)
5.Mechanical noise :
Continuous,monotonous,not unpleasant sound to be heard.
To be mutually discussed when questionable.
6.Rotational torque : 150 ～ 450 gf·cm
7.Stopper strength of shaft
with manual operation : 9 kgf·cm min.
with motor drive : Shaft must be slipped at the both ends of manual rotation.

8.Bushing nut tightening strength : 15 kgf·cm min.
(Pay attention otherwise the strength may not be assured.)
9.Push / pull strength :
No damages with an application of push or pull force 10 kgf for 10 sec.
10.Resistance to soldering heat :
After soldering there shall be no evidence of poor contact between resistance element and terminals, or any physical damage as a result of the test.
The terminal of the potentiometer less than 350℃ and within 5 sec.
The terminal of the motor less than 350℃ and within 2 sec.

CLASS.NO. | TITLE: SPECIFICATIONS

Electrical specifications

1.Total resistance : Nominal total resistance ± 20%(10kΩ≦R≦2MΩ)
2.Maximum operating voltage : 30V A.C.
3.Resistance taper : See taper figure
4.Maximum attenuation level at full C.C.W. position :

Total resistance	Attenuation level
R≧100kΩ	100 dB min.
100kΩ>R≧ 50kΩ	90 dB min.
50kΩ>R≧ 10kΩ	80 dB min.

5.Insertion loss at full C.W. position : 0.1 dB max. (Measure between K1&K2 term 1-2 output V term 1-3 input V)
6.Gang error :

Total resistance	Gang error
R≧50kΩ	3 dB max. between -70 dB less than -60 dB 2 dB max. between -60 dB ～ 0 dB
50kΩ>R≧20kΩ	3 dB max. between -60 dB less than -40 dB 2 dB max. between -40 dB ～ 0 dB
20kΩ>R≧10kΩ	3 dB max. between -60 dB ～ 0 dB

7.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.)
8.Insulation resistance
Potentiometer section : More than 100MΩ at 500V D.C.
Motor section : More than 1MΩ at 100V D.C.
9.Withstand voltage
Potentiometer section : 500V A.C. for 1 minute.
10.Supply voltage of motor : 2～6V D.C.
11.Rated voltage for Motor : 3V D.C.
12.Motor current(at 3V applied to motor)
Normal operation : 100mA max.
Slipping operation at both ends : 150mA max.

Endurance specifications

1.Rotational life : 15,000 cycles min.

15A
A

SYMB.	DATE	APPD.	CHKD.	DSGD.
1	91.3.19	M.S	R.K	T.Y

ALPS ELECTRIC CO., LTD.

APPD.	CHKD.	DSGD.	TITLE
Aug.30,'90 M.Sato	Aug.29'90 R.Kuroka	Aug.30'90 T.Yamaguchi	

DOCUMENT NO. 4K272AMS-1

CLASS.NO.	TITLE SPECIFICATIONS	

Note

1.The standard test shall be subject to a temperature from 5 ℃ to 35 ℃ and relative humidity from 45% to 85%. Test shall be done under environmental requirements of a temperature of 20 ± 2 ℃ and relative humidity of 65 ± 5% if a decision is in question.

2.Notice on motor

1)Motor terminals shall not be bent more than twice.

2)Soldering to the motor terminals shall be within a few second, not to cause the transformation of terminal base plastics. And, avoid that the flux flows into the motor. Pay special attention to the terminals when they are wave soldered.

If the flux flows into the motor, it may cause a poor contact.

3)Motor terminal should not be pressed inside the motor. It may cause a poor contact in the motor.

4)Pay attention that a piece of iron and an alien substance are not crepted into the motor.

5)In operation, temperature arround the motor produce an effect on the performance and life. Pay special attention in high temperature and humidity. Storage in high temperature and humidity,and in corrosive gas, shall be avoided.

6)In case, using the adhesive agent and the seal agent etc.for fit up, make sure that there is no generation of the harmful gas for motor.(including all chemicals arround the motor.) Pay special attention to cyanogen system adhesive agent and organically system silicone.

CLASS.NO.	TITLE SPECIFICATIONS	

3.Power supply

Regulated D.C. power supply shall be used.

(ripple to be 1% max.)Motor terminal shall not be conected with fixed resistors in series.

And supply current is to be 350mA min.

4.Knob

The material of the knob shall be insulation material.

As potentiometer is not grounded, conductive material of the knob may cause a earth noise.

5.The items except above mentioned items shall meet or exceed JIS C 6443.

SYMB	DATE	APPD	CHKD	DSGD

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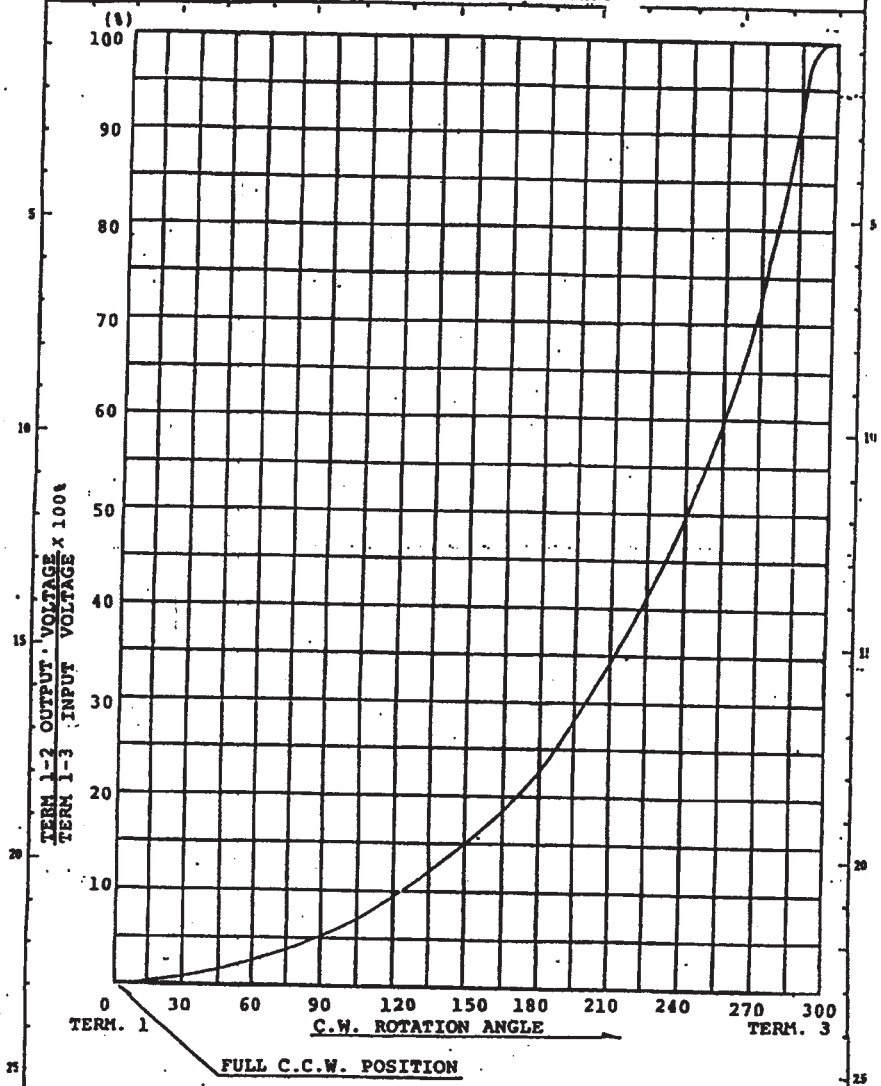
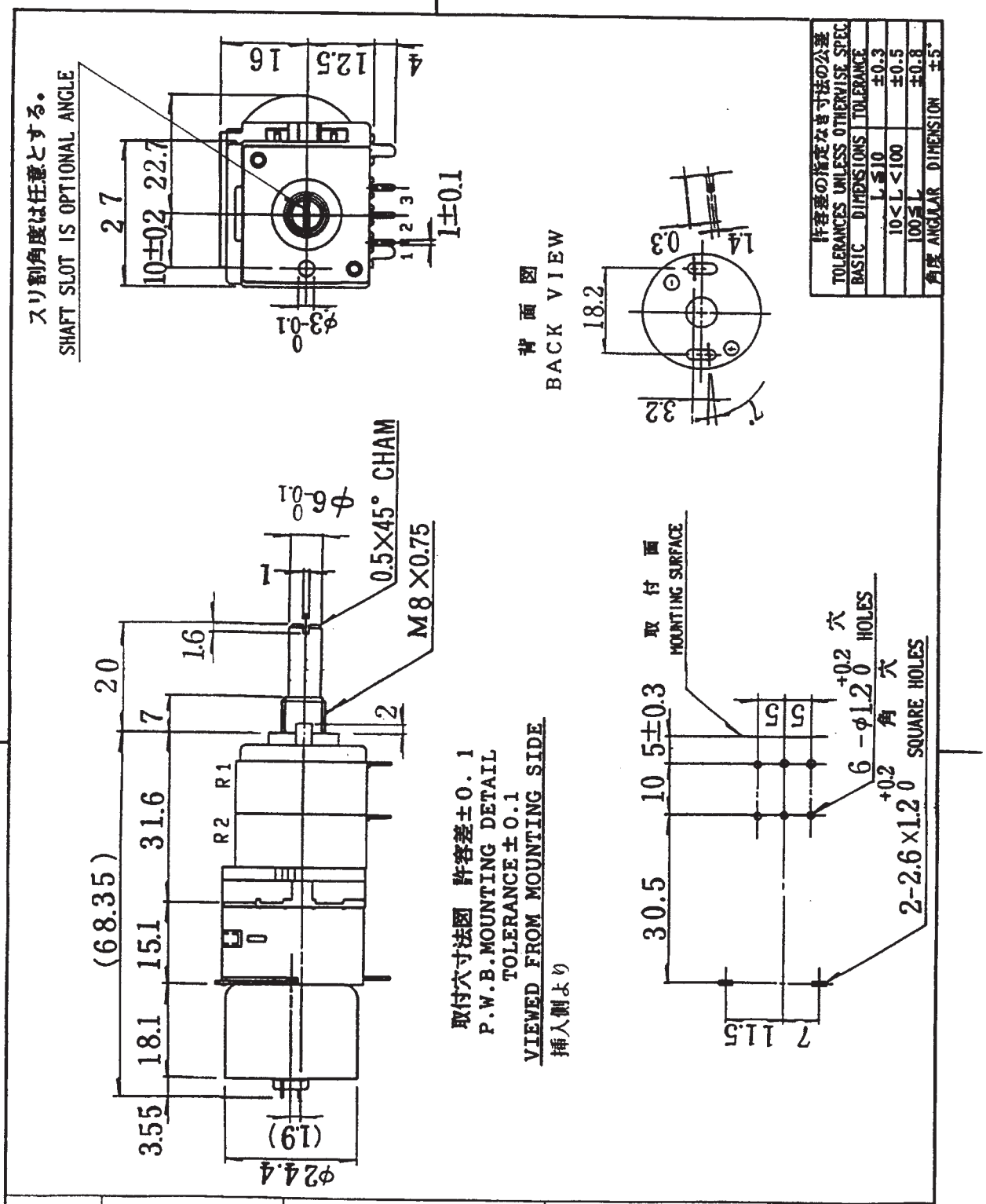
APPD.	CHKD.	DSGD.	TITLE
Apr.11'90 H.Shimomura	Apr.10'90 K.Kuroda	Apr.11'90 S.Sugawara	DOCUMENT NO.

ALPS ELECTRIC CO., LTD.



At 180° C.W shaft rotation from full C.C.W position voltage percent shall fall within the limits of 15~30 percent.

					APPD	CHKD.	DSGD.	NAME
					May 31.'85	May 30'85	May 29'85	RESISTANCE TAPER
Aug	Aug 31 '15	M.T.	T.K	S.S				
SYMB.	DATE	APPD.	CHKD.	DSGD.	T. Inoue	T. Kuwagi	S. Sasaki	.. HSA02



許容差の指定なき寸法の公差 TOLERANCES UNLESS OTHERWISE SPEC	
BASIC DIMENSIONS	TOLERANCE
L≦10	±0.3
10<L<100	±0.5
100≦L	±0.8
角度 ANGULAR DIMENSION	±5°

PART NO.	NAME	MATERIAL NAME & CODE	FINISH

ALPS ELECTRIC CO., LTD.

UNIT	SCALE
mm	:

APPD.	CHKD.	DSGD.
W設1 '90.5.19	設8 '90.5.18 日下	設8 '90.5.18 菅原

TITLE 27形1軸2連 モータ駆動ボリューム組立図

DOCUMENT NO. K272AMC002

SYMB.	DATE	APPD.	CHKD.	DSGD.