

Customer: AEE-DS

No. F3888254M

Date: Dec. 15, 1994

Attention:

Your ref. No:

Your Part. No:

SPECIFICATIONS

ALPS:

MODEL RS30H121D
(10KB X 2)

Spec. No.:

Sample No.: F3888254M

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 Id. Fujita

APP'D A. Ito

ENG. DEPT. DIVISION

Sales

No. F388254M**SPECIFICATIONS**

1. THIS SPECIFICATIONS APPLY TO RS30H121D POTENTIOMETERS.

2. CONTENTS OF THIS SPECIFICATIONS.

4S302K-311M
4S000K-510M
4S0001-200M, 4S0001-201M
S302KGD03

3. MARKING

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

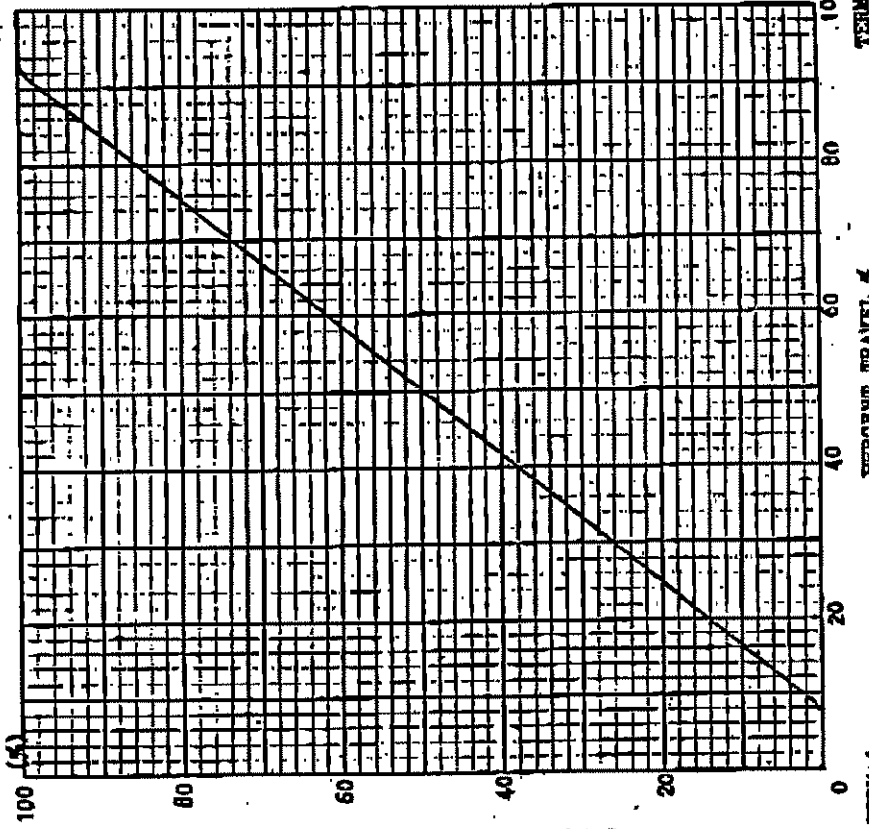
4. REMARKS

· NOTES

· Marking ⇒ in specifications shows standard and condition for application.

USED ON 30 mm	NAME RESISTANCE TAPER
TRAVEL TYPE TAPER	TITLE SPECIFICATIONS
ALPS ELECTRIC CO., LTD. 1-7 YUKIGAYA OTSUKA-CHO OTA-KU TOKYO JAPAN	

TAPERED CURVE: ALPS "B"



TERM 1-2 OUTPUT VOLTAGE X 100 %

TERM.3

PERCENT TRAVEL %

TERM.1

NOTES: PERCENT VOLTAGE CHECK POINT

50% TRAVEL FROM TERM.1

TOLERANCE

40 - 60 %

STAB/DATA	APFD	CHKD.	DSGD.	NAME
				RESISTANCE TAPER
				DWG. NO. SBS48

FOR

CLASS	TITLE	SLIM TYPE POTENTIOMETER (SLI)							
ELECTRICAL									
1. Overall resistance		Unit: 1 KΩ							
Overall resistance tolerances: ±20%									
	5	10	20	50	100	200	250	500	1,000
2. Minimum resistance		Unit: 1 Ω							
Overall resistance (KΩ)	5, 10	20, 50	100	200	500	1000			
Across term. 1-2	30	50	100	200	300	500			
Across term. 2-3	50	70	120	220	320	500			

- Taper: ALPS "B" (SBS48)
- Rated power: 0.1 Watta.
- Rated voltage: Rated voltage = $\sqrt{P \cdot R}$ (V)
P: rated power (W)
R: nominal overall resistance (Ω)
When the rated voltage exceeds the maximum operating voltage the maximum operating voltage shall be the rated voltage.
Maximum operating voltage: A.C. 200V, D.C. 10 V
- Insulation resistance: Greater than 100 megohms between front section and rear section terminals when tested by a 250 volts D.C. insulation resistance meter.
- Dielectric test: Units shall be designed to withstand 300 volts A.C. 50 Hz R.M.S. between front section and rear section terminals for a period of one minute without damage or arcing.
- Tracking error: 2 dB at the point 50% travel
- Sliding life test: 10,000 cycles
- Lever shall be operable with speed of 20 mm per sec. without noise by static electricity.

ALPS ELECTRIC CO., LTD.	
DATE	APPROVED
9/12	9/12
4S302K-311M	4S302K-311M

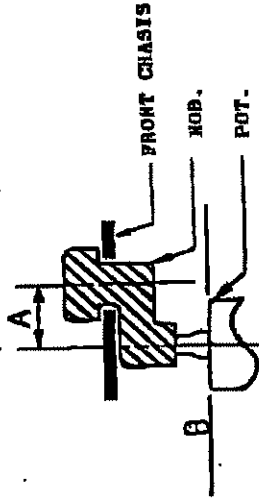
FOR

CLASSNO. TITLE

PRECAUTION IN USE

1. If it will be used the operating point away from the center line of the lever, it should be shorter as possible.

2. About the length of lever if conditiona permit, it is advisable to use the shortest possible lever. The longer the length up to operating point, the more unfeverable slide feeling will be given.



3. Regarding the operation of the lever, please consider the above mentioned, and make sure nothing is wrong with the operation under installing in your appliance that you plan to use our products actually.

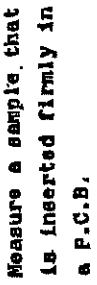
APPL. NO.		ISSUED		TITLE	
APPL. NO.		ISSUED		TITLE	
APPL. NO.		ISSUED		TITLE	
APPL. NO.		ISSUED		TITLE	
DATE	APPL. NO.	DATE	APPL. NO.	DATE	APPL. NO.
				DOCUMENT NO. 450001-200M (/)	

CLASSNO. TITLE

SLIM TYPE SLIDE POTENTIOMETER

MECHANICAL

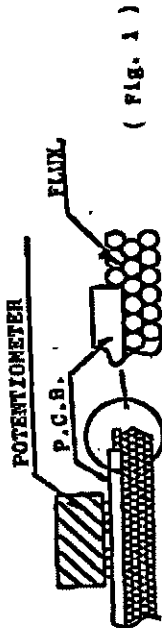
- Travel : Specified in particular Figure.
- Operating force : 60 -40 gf (Note 1)
(Note 1) Measuring temperature : 5 °C ~35 °C
Measuring point : 2mm from the top of the lever.
Sliding speed : 20mm per sec.
- Stop strength : 3kgf at a position 2mm from the base of the lever.
- Lever lateral play: When 250gf is applied in a sidewise direction to a point 2mm from the base of the lever, the bothside movement of the lever, shall be less than 1.6mm.
- Lever strength : To be resistant with 3kgf static force of pull or push applied to lever in thrust direction for 10 seconds without damage.
- Resistance to soldering heat : 3 sec. max. at 300 °C
- Lever inclination : Measure a sample that is inserted firmly in a P.C.B. **MAX. 2°**



APPL. NO.		ISSUED		TITLE	
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APPL. NO.		ISSUED		TITLE	
DATE	APPL. NO.	DATE	APPL. NO.	DATE	APPL. NO.
				SPECIFICATIONS DOCUMENT NO. 45000K-510M	

FOLLOW THE NEXT CONDITIONS FOR SOLDERING

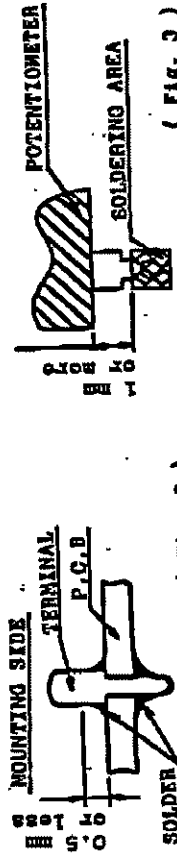
- 1. Solder
63 % Sn solder specified in JIS Z3282.
- 2. Board in Use
Double-faces through-hole board or
Single-face copper laid laminate board.
Plate thickness (t) = 1.5 mm
- 3. In the Case of Dip Soldering
(1) Htate of potentiometer
Position a lever in the vicinity of center.
(2) Specific Gravity of Flux
0.83±0.01 (foaming type)
(3) Height of Flux face
A level of the upper face of flux for reaching the position
at a half of the plate thickness of printed board. (Fig.1)
Further, no flow of flux invading on the surface of printed
board on the side of installing potentiometer is allowed.



(Fig. 1)

- (4) Preheat Condition
100°C MAX. within 1 minute
(Temperature on the side of installing printed board is designated.)
- (5) Soldering Condition
Solder temperature) 260°C MAX.
Soldering period) within 5 seconds
Time of soldering) only one time is permitted
- 4. In the Case of Manual Soldering
Solder temperature) 300°C MAX.
Soldering period) within 3 seconds
Time of soldering) only one time is permitted

- 5. Matters to Be Noted
(1) Do not add any stress on terminals in the case of soldering.
For instance, forced movement of potentiometer with terminals being heated may probably deteriorate the electric features due to generation of looseness in connection between resistant board and terminals.
(2) Avoid use of double-faces through-hole board as much as possible. If it is necessary to use it. Do not apply through-hole plating to a hole in which a potentiometer is inserted, and install a land to which terminals are soldered only on a face opposite to the face on the side of installing potentiometer.
(3) Use caution to soldering process so as to prevent solder from rising up to the surface of printed board on the side of installing potentiometer, because defective contact may take place in terminal connecting part due to soldering heat (Fig. 2)



(Fig. 2)

- (4) In the case of lead wiring, solder it so that a gap of 1 mm or more may be reserved between the potentiometer body and soldering part. (Fig. 3)

- (5) The grade of influence of soldering exerted on the potentiometer depends upon the size of a printed board, installing position of the potentiometer, and the size of a solder bath etc. Therefore, make sure, in advance, of no abnormal state under the conditions of soldering to be carried out at present.

		APPD.	CHKD.	DSCD.
		<i>App. 5/1 Sep. 5/91</i>		
DATE	APPR.	CHKD.	DSCD.	DOC. NO.
	<i>5/1</i>	<i>5/1</i>	<i>5/1</i>	4S0001 - 201M
				SLIDE POTENTIOMETER
				DOCUMENT NO.

S=15

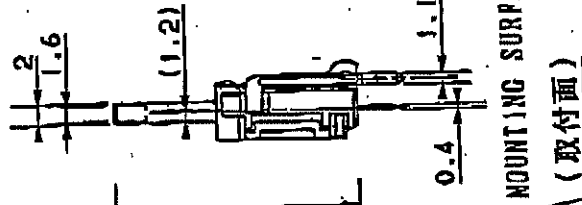
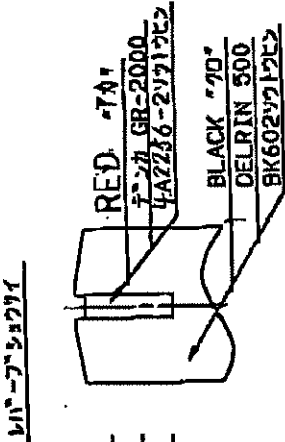
TYPE NO.	L	L1	L2	L3	CLICK	A	B	C	D	PN
S152KGD03	9.5	22.5	10	7	—	30	27.5	22.5	17.5	—
S152KGD04	14.5	27.5	15	9	—	—	—	—	—	—
S152KKD03	9.5	22.5	10	7	CENTER	—	—	—	—	—
S152KKD04	14.5	27.5	15	9	CENTER	—	—	—	—	—

S=20

TYPE NO.	L	L1	L2	L3	CLICK	A	B	C	D	PN
S202KGD03	9.5	22.5	10	7	—	35	32.5	27.5	22.5	—
S202KGD04	14.5	27.5	15	9	—	—	—	—	—	—
S202KKD03	9.5	22.5	10	7	CENTER	—	—	—	—	—
S202KKD04	14.5	27.5	15	9	CENTER	—	—	—	—	—

S=30

TYPE NO.	L	L1	L2	L3	CLICK	A	B	C	D	PN
S302KGD03	9.5	22.5	10	7	—	45	42.5	37.5	32.5	—
S302KGD04	14.5	27.5	15	9	—	—	—	—	—	—
S302KKD03	9.5	22.5	10	7	CENTER	—	—	—	—	—
S302KKD04	14.5	27.5	15	9	CENTER	—	—	—	—	—

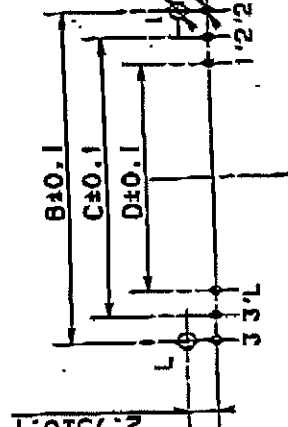


NOTE

1. TOP SIDE OF KNOB SHALL BE MOUNTED TO LEVER WITHIN 20mm LENGTH.

ツマミ表面は、レバー長さ内20mm以内にて取付下さい。

MOUNTING HOLE DETAIL (取付詳細)
(VIEWED FROM MOUNTING SIDE) (取付側面)



2-φ1.6 HOLES
6-φ0.8±0.1 HOLES
L: LUG TERMINAL (ツマミ)

TOLERANCES UNLESS OTHERWISE SPEC	TOLERANCES
UP TO 10	±0.3
ABOVE 10 TO 100	±0.5
ABOVE 100	±0.6
ANGULAR DIMENSION	± 5°

PART NO.	NAME	MATERIAL NAME	FINISH
ALPS ELECTRIC CO., LTD.			
DESIGN	SCALE	S2K-D112-2	
CHKD.	DATE	PICTURE: M 3.30	
APPR.	DATE	SLIDE PART: 0MAY 98	
ZONE	SYMB	DATE	UNIT
Δ1	98-3-20	87-06-26	M 10
APPRO	CHKD	DATE	UNIT