

Customer: ALPS ELECTRIC EUROPA GmbH

No. F3852497M

Date: Nov. 22, 1994

Attention:

Your ref. No: 22 3005

Your Part. No: STRS 30102

# SPECIFICATIONS

ALPS:

MODEL STRS30102K

Spec. No.:

Sample No.: F3852497M

RECEIPT STATUS  
 RECEIVED  
 By. Date 25/11/94  
 Signature PSL  
 Name  
 Title

ALPS ELECTRIC CO., LTD.

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

DSG'D M. Fujita

APP'D H. Ito

ENG. DEPT. DIVISION

Sales

## SPECIFICATIONS

1. THIS SPECIFICATIONS APPLY TO RS3011114 POTENTIOMETERS.

2. CONTENTS OF THIS SPECIFICATIONS.

4S3018-302M  
4S0008-45M  
4S0001-200M, 4S0001-201M  
S3018G402A

3. MARKING

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

4. REMARKS

· NOTES

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

CLASSNO.	TITLE STANDARD TYPE POTENTIOMETER (SLIDE)
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**ELECTRICAL**

1. Overall resistance :

Overall resistance tolerances : ±20 %

Unit : KΩ

5	10	20	50	100	200	250	500	1,000
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2. Minimum resistance :

Unit : Ω

Overall resistance (KΩ)	5,10	20,50	100	200, 250	500	1000
Across term.1-2	30	50	100	200	300	500
Across term.2-3	50	70	120	220	320	500

3. Taper : ALPS "B" (SBS48)

4. Rated power : 0.2 Watts.

5. 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

6. Dielectric test : Units shall be designed to withstand 300 volts A.C. 50 Hz R.M.S. between resistance elements and case for a period of one minute without damage or arcing.

7. Insulation resistance : Greater than 100 megohms between resistance elements and case when tested by a 250 volts D.C. insulation resistance meter.

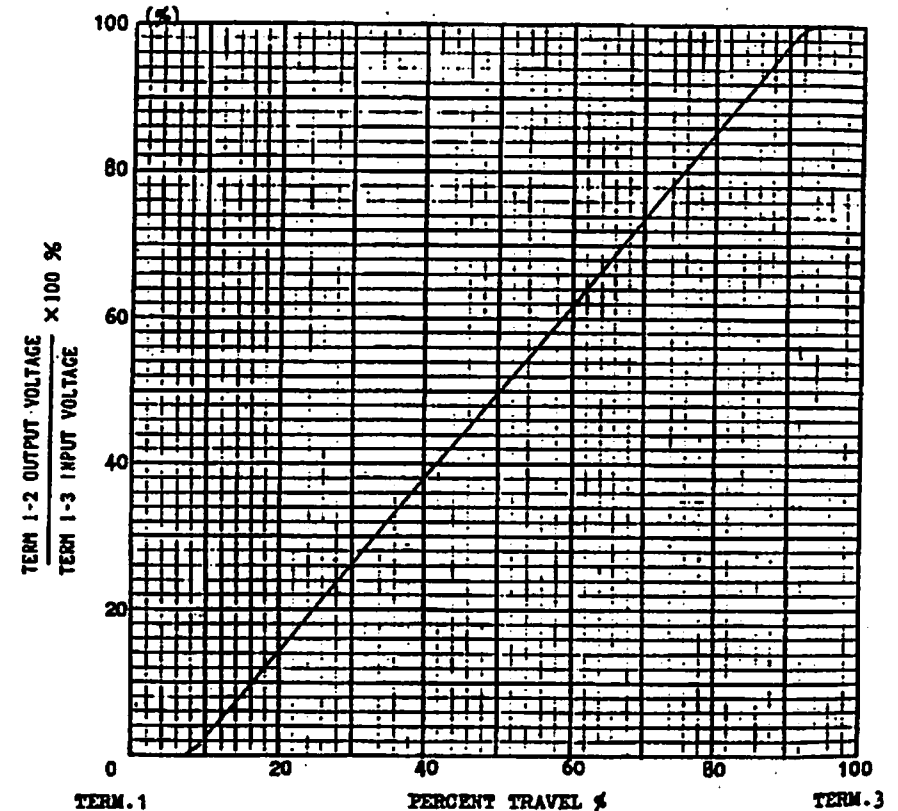
8. Sliding lifetest : 15,000 cycles

• Lever shall be operable with speed of 20 mm per sec. without noise by static electricity.

<b>ALPS ELECTRIC CO., LTD.</b>					
APPD.	CHKD.	DSGD.	TITLE		
Aug. 30/81		Aug. 29/81	SPECIFICATIONS		
DOCUMENT NO.			4S3018-302M		
SYMB.	DATE	APPD.	CHKD.	DSGD.	

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

TAPERED CURVE: ALPS "B"



NOTES: PERCENT VOLTAGE CHECK POINT

50% TRAVEL FROM TERM.1

TOLERANCE

40 - 60 %

APPD.	CHKD.	DSGD.	NAME
Apr. 28/81		Apr. 28/81	RESISTANCE TAPER
SYMB.	DATE	APPD.	CHKD.
DWG. NO.			SBS48

CLASSNO. TITLE STANDARD TYPE POTENTIOMETER (SLI.-)

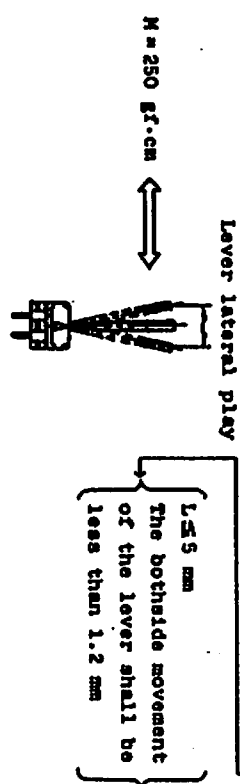
**MECHANICAL**

1. Travel : Specified in particular Figure.
2. Operating force : 30-250 gf ( Note 1 )
3. Starting force : Operating force + 100 gf max. ( Note 1 )  
(Note 1) Measuring temperature : 5°C - 35°C

Measuring point :  
 → : 5 mm from lever end (Lever length > 6 mm)  
 : 1 mm from lever end (Lever length ≤ 6 mm)  
 Sliding speed : 20 mm per sec.

4. Stop strength :  
 → 5 kgf at a position 5 mm from mounting surface.  
 (Lever length > 6 mm)  
 5 kgf at a position 2 mm from mounting surface.  
 (Lever length ≤ 6 mm)

5. Lever lateral play :  
 When an alternating bending moment of 250 gf.cm is applied perpendicular to the direction of lever travel, the bothside movement of the lever shall be less than 2. ( 2X L / 20 ) mm  
 L: Lever length on the measurement point from mtg. surface.  
 (Note 2) Exempt varping of insulated lever.



6. Lever strength :  
 (1) To be resistant with 5 kgf static force of pull or push applied to lever in thrust direction for 10 seconds without damage.

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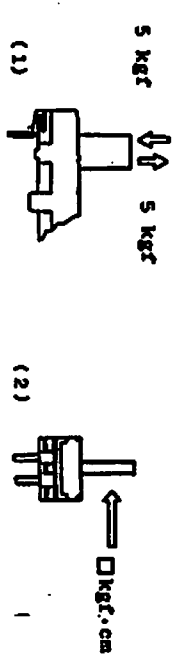
APPL.	CHRG.	DESIGN	TITLE	SPECIFICATIONS
...	...	...	...	...
DATE	APPROV.	CHKD.	DOCUM. NO.	450008-45M (1/2)

(ALPS ELECTRIC CO., LTD. 450008-45M 1/2)

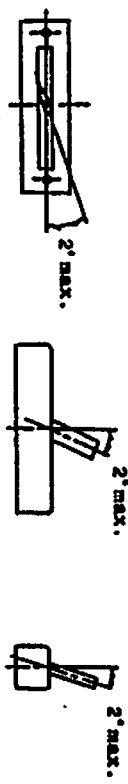
CLASSNO. TITLE STANDARD TYPE POTENTIOMETER (SLIDE)

(2) To be resistant with following static force applied to lever in vertical direction to lever driving for 10 seconds without damage.

- ① 2 kgf.cm over : in case of pot., mounted to chassis with screws.
- ② 0.5 kgf.cm over : in case of pot., mounted to P.C.B. only with terminals.
- ③ 2 kgf.cm over : in case of pot., mounted to P.C.B. with both terminals and mounting plate.



7. Lower inclination and twist :  
 Twist : In inclination 2° max. In inclination 2° max.



8. Resistance to soldering heat : 3 sec. max. at 300°C

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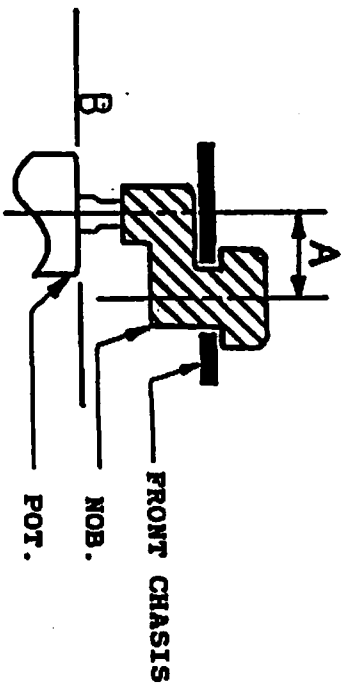
APPL.	CHRG.	DESIGN	TITLE	SPECIFICATIONS
...	...	...	...	...
DATE	APPROV.	CHKD.	DOCUM. NO.	450008-45M (2/2)

(ALPS ELECTRIC CO., LTD. 450008-45M 2/2)

1 2 3 4 5 6 7 8 9 10

**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 conditions permit, it is advisable to use the shortest possible lever. The longer the length up to operating point, the more unfavorable 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.



APPD.	CHKD.	DSCGD.	ALPS ELECTRIC CO., LTD.	
Aug. 10 '91	Aug. 9 '91	Aug. 9 '91	SLIDE POTENTIOMETER	
...	...	...	DOCUMENT NO.	
...	...	...	450001-200M	
...	...	...	...	



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) = 1.6 mm

3. In the Case of Dip Soldering

(1) State of potentiometer

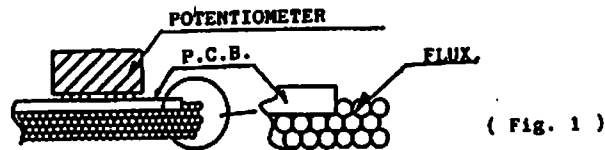
Position a lever in the vicinity of center.

(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.



(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

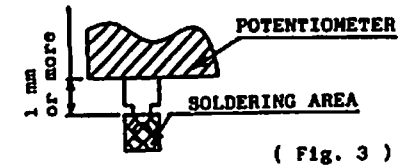
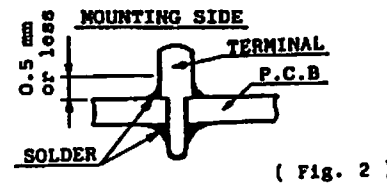
5. Matters to Be Noted

(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 )

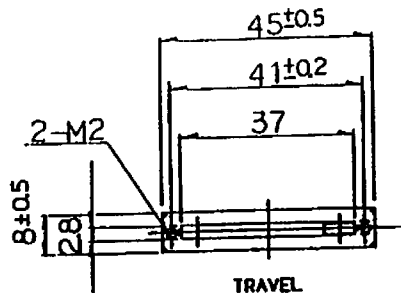
(4) In the case of lead wiring, solder it so that a gap of 1 mm or more may be reserved between the potentiometer body and soldering part. ( Fig. 3 )



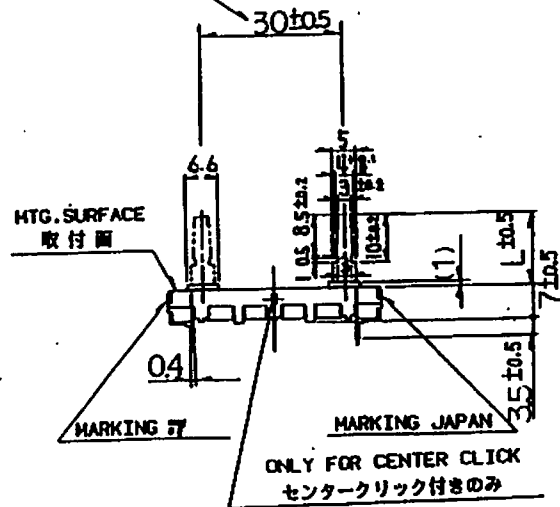
(5) The grade of influence of soldering exerted on the potentiometer depends upon the size of a printed board, installing position of the potentiometer, and the size of a solder bath etc. Therefore, make sure, in advance, of no abnormal state under the conditions of soldering to be carried out at present.

					<b>ALPS ELECTRIC CO., LTD.</b>		
					APPD.	CHKD.	DSCD.
					Dep. 5/91	Dep. 5/91	Dep. 5/91
					G. Aki	H. Ito	M. Sato
SYMB.	DATE	APPD.	CHKD.	DSCD.	TITLE		
					SLIDE POTENTIOMETER		
					DOCUMENT NO.		
					4S0001 - 201M		

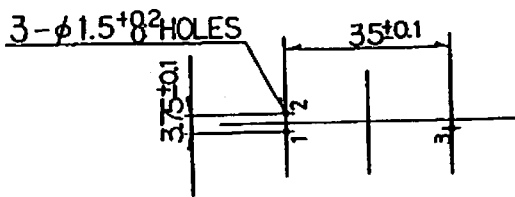
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TRAVEL  
移動距離



MOUNTING HOLE DETAIL 取付寸法図  
(VIEWED FROM MOUNTING SIDE) (挿入側より)



NOTES

1. MOUNTING SCREW THREAD LENGTH IS CHASSIS THICKNESS + 2 mm MAX.  
取付用ネジの首下長さは、シャーシ板厚 + 2 mm 以下とする。
2. TOP SIDE OF KNOB SHALL BE MOUNTED TO LEVER WITHIN 3.0 mm LENGTH FROM LEVER MTG. SURFACE.  
取付面からツマミ先端まで 3.0 mm 以内でご使用願います。

L	NO CLICK クリックなし	P/N 登録	WITH CENTER CLICK センタークリック付き	P/N 登録
25	S3018G401A	614-1	S3018K401A	614-1
20	S3018G402A	614-1	S3018K402A	..
15	S3018G403A	614-1	S3018K403A	614-1

許容値の指定および寸法の公差		ALPS ELECTRIC CO., LTD.	
TOLERANCES UNLESS OTHERWISE SPEC		UNIT	SCALE
BASIC DIMENSIONS	TOLERANCE	mm	mm
L ≤ 10	± 0.3	APPR.	DISCD.
10 < L < 100	± 0.5	Apr. 28 '86	Apr. 7 '86
100 ≤ L	± 0.8	Apr. 1 '86	
ANGULAR DIMENSION	内度 ± 5°	DATE	APPR. CHRD. DISCD.
		ZONE	SYMB
		DATE	APPR. CHRD. DISCD.
		FIGURE: SLIDE POTENTIOMETER 30mm SINGLE UNIT 30形単連スライドボリューム組立図 DOCUMENT NO. S3018-4111	