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**abs**  
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Autorisierter  
Bauelemente  
Distributor von

**ALPS®**

Date : Aug. 01, 1995

Attention:

Your ref. No:

Your Part. No: ET 5494

401547

**SPECIFICATIONS**

ALPS :

MODEL RS6011266  
(10k BX2)

Spec. No. :

Sample No. : F4517802M

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 /d/ Sugawara

APP'D M. Satoh

ENG. DEPT. DIVISION

Sales

## SPECIFICATIONS

1. THIS SPECIFICATIONS APPLY TO RS6011266 POTENTIOMETERS.

2. CONTENTS OF THIS SPECIFICATIONS.

4S6028-402M  
4S0008-45M  
4S0001-200, 4S0001-201  
S6028P623A

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.

PRELIMINARY copy.

CLASS NO. TITLE STANDARD TYPE POTENTIOMETER (S.L.A.)

ELECTRICAL

1. Overall resistance : Overall resistance tolerances :  $\pm 20\%$  Unit : K $\Omega$

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

Overall resistance (K $\Omega$ )	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

3. Taper : ALPS "B" (SBS50)

4. Rated power : 0.2 Watts.

5. Rated voltage : Rated voltage =  $\sqrt{P \cdot R}$  (V)

P : rated power (W)  
 R : nominal overall resistance ( $\Omega$ )  
 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. 10V

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. Tracking error : 2 dB at the point 50% travel

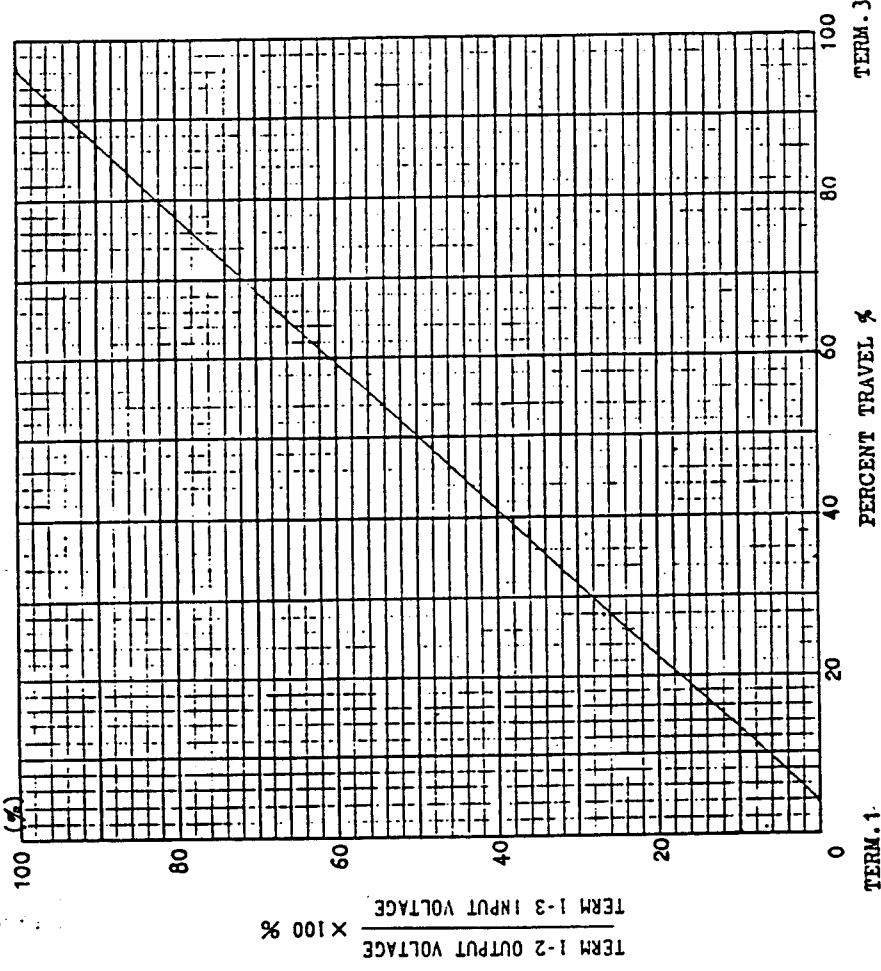
9. Sliding lifestest : 15,000 cycles

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

SYMB	DATE	APPD	CHKD	DSCGD	APPD	CHKD	DSCGD	TITLE	SPECIFICATIONS
								ALPS ELECTRIC CO., LTD.	DOCUMENT NO.
									4S6028 - 402M

USED ON	NAME
60 TRAVEL TYPE	RESISTANCE TAPER
ALPS	TITLE
	SPECIFICATIONS

TAPERED CURVE: ALPS "B"



NOTES: PERCENT VOLTAGE CHECK POINT

50% TRAVEL FROM TERM.1

TOLERANCE

40 - 60 %

SYMB	DATE	APPD	CHKD	DSCGD	APPD	CHKD	DSCGD	NAME	RESISTANCE TAPER

CLASS.NO.

TITLE

STANDARD TYPE POTENTIOMETER (SLIDE)

## MECHANICAL

- Travel : Specified in particular Figure.
- Operating force : 30-250 gf ( Note 1 )
- 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  $2 ( 2 \times L / 20 )$  mm

L: Lever length on the measurement point from mtg. surface.  
(Note 2) Exempt warping of insulated lever.

Lever lateral play



M = 250 gf.cm

 $L \leq 5$  mm

The bothside movement of the lever shall be less than 1.2 mm

6. Lever strength :

- 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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SPECIFICATIONS

SYMB	DATE	APPD.	CHKD.	DSGD.

Sep. 3 '91

M. Sato

A. Sato

A. Sato

A. Sato

A. Sato

DSGD.

CHKD.

APPD.

DATE

SYMB

TITLE

SPECIFICATIONS

DOCUMENT NO.

4 S 0 0 8 - 4 5 M (1/2)

CLASS.NO.

TITLE

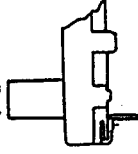
STANDARD TYPE POTENTIOMETER (SLIDE)

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

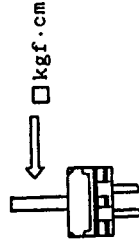
- 2 kgf.cm over : in case of pot., mounted to chassis with screws.
- 0.5 kgf.cm over : in case of pot., mounted to P.C.B. only with terminals.
- 2 kgf.cm over : in case of pot., mounted to P.C.B. with both terminals and mounting plate.

5 kgf

5 kgf



(1)



(2)

7. Lever inclination and twist :

Twist

Inclination

Inclination

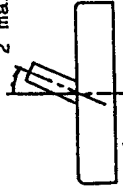
2° max.

2° max.

2° max.



2° max.



2° max.



2° max.

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

ご使用上の注意

**PRECAUTION IN USE**

1. 偏心ツマミをご使用になる場合

レハ<sup>レ</sup>の中心より離れたところを作用点としてご使用になる場合、可能な限り  
下図A寸法を短くしてご使用下さい。

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

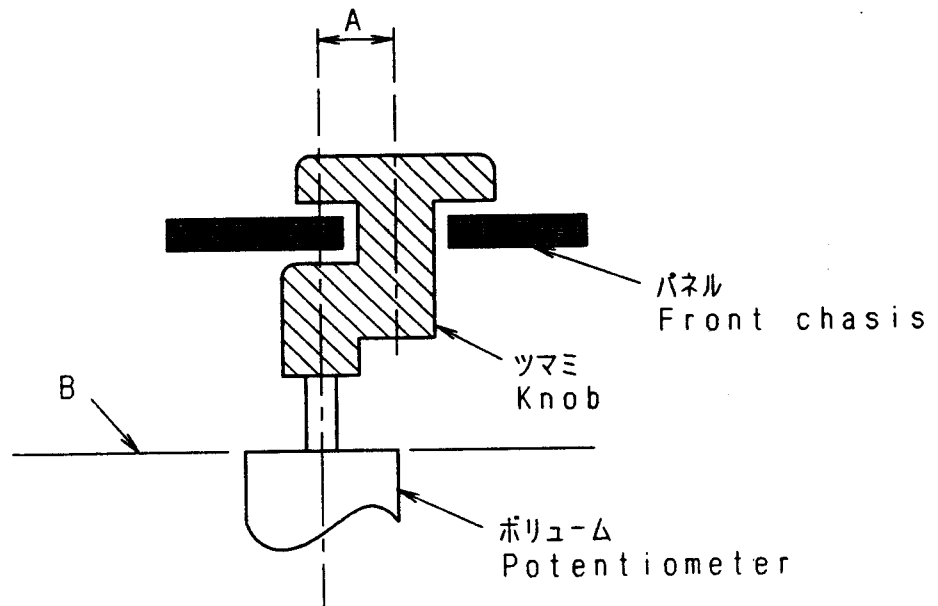
2. レハ<sup>レ</sup>長さについて

レハ<sup>レ</sup>長さについては、ツマミを含めて、下図B面より極力短いものをご使用願います。レハ<sup>レ</sup>長さについては、作用点までの距離が短いほどしゅう動感が良好となり、長いほど好ましくない感触になります。

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. レハ<sup>レ</sup>の駆動に関しては上記内容を考慮の上、セット実装を行い  
あらかじめ異常のないことをご確認願います。

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.

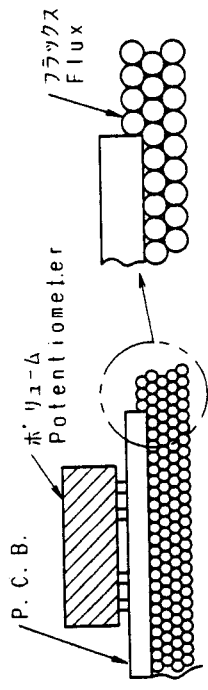
4. ツマミ挿入及びレハ<sup>レ</sup>操作は、ポ<sup>リ</sup>リウムマウント基板に  
ソリ(曲がり)のない状態で行って下さい。

Knob assembly on the lever and functioning the lever to be performed under the condition of P. C. B. without warp.

					<b>ALPS ALPS ELECTRIC CO., LTD.</b>				
					APPD.	CHKD.	DSGD.	TITLE	スライドポ <sup>リ</sup> リウム仕様書 SPECIFICATIONS
					PDI-ENGI '95.7.24 YOSHIOKA	PDI-ENGI '95.7.24 KIMURA	PDI-ENGI '95.7.24 Y.SAITOH	DOCUMENT NO.	4S0001-200
ORIGINAL	91-7-3	Y·Y	K·N	S·A					
SYMB	DATE	APPD	CHKD	DSGD					

**はんだ付け条件  
FOLLOW THE NEXT CONDITIONS FOR SOLDERING**

1. はんだ SOLDER  
JIS Z 3282に規定の63% Snはんだを使用  
63% Sn solder specified in JIS Z 3282.
2. 使用基板 BOARD IN USE  
両面スルーホール基板又は、片面銅箔積層板 板厚  $t=1.6\text{mm}$   
Double-faces through-hole board or Single-face  
copper laid laminate board.  
Plate thickness ( $t$ ) = 1.6mm
3. 自動はんだ<DIP条件>  
センター付近に設定願います。  
(1) レバ・位置 センター付近に設定願います。  
(2) フラックス比量  $0.83 \pm 0.01$  (発泡式)  
(3) フラックス高さ フロント基板の板厚の半分の位置にフラックスの上面が接するレベル (図1)  
又、ホリウム挿入部への流れ込みのないこと。(フラックス上がり、蒸散に注意)  
(4) フロリウム挿入部への流れ込みのないこと。(フロリウム挿入部の温度)  
(5) はんだ温度  $100^{\circ}\text{C}$  max. 時間1分以内。 (フロリウム挿入部の温度)  
**IN THE CASE OF DIP SOLDERING**  
(1) State of potentiometer  
Position a lever in the vicinity of center.  
(2) Specific Gravity of Flux  
 $0.83 \pm 0.01$  (foaming type)  
(3) Height of Flux face  
A level of the upper face of flux for reaching  
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  
 $100^{\circ}\text{C}$  max., within 1 minute  
(Temperature on the side of installing printed  
board is designated.)  
(5) Soldering condition  
Solder temperature:  $260^{\circ}\text{C}$  max.  
Soldering period : within 5 seconds  
Time of soldering : only one time is permitted



(Fig. 1)

4. 手はんだ IN THE CASE OF MANUAL SOLDERING  
はんだ温度  $300^{\circ}\text{C}$  max. 時間3秒以内 はんだ回数は1回までとする。  
Solder temperature :  $300^{\circ}\text{C}$  max.  
Soldering period : within 3 seconds  
Time of soldering : only one time is permitted

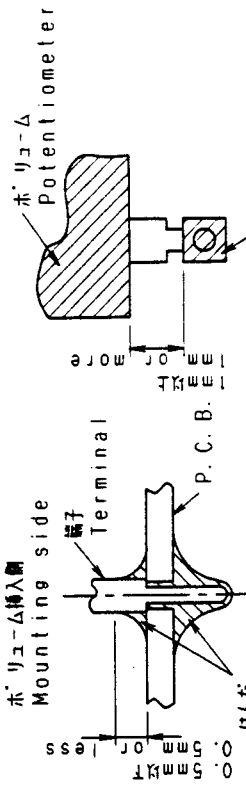
ALPS ELECTRIC CO., LTD.		TITLE スライト・ホリウム 仕様 SPECIFICATIONS 1/2	
APPD.	DESIGN	DATE	BY
95.7.24	95.7.24	95.7.24	Y.S.
Y.Y.	S.A.	S.S.	
DATE	APPD	CHKD	DSGD
ORIGINAL	41-9-3	Y-Y	S.A.
SYMB	DATE	APPD	CHKD
4S0001-201		OR	

**5. 注意**

- (1) はんだ付けの際に、端子にストレスを加えないで下さい。例えば、端子に熱を加えたまま製品を動かしますと、かしめ力、夕及び電気的特性が劣化する恐れがあります。
- (2) 両面スルーホール基板を使用する場合は、ホリウム挿入部の端子取付穴に、はんだランドが不要な場合、はんだ取付穴からの直接取り出しを避けスルーホール配線用の穴を設けるなどの配慮をお願いします。
- (3) ホリウム挿入部へのはんだ上がりは、はんだ熱による端子接触不良の発生原因となりますので(図2)を参照願います。
- (4) リード配線の場合、ホリウム本体と、はんだ付け部の距離を1mm以上開けてはんだ付け願います。(図3)
- (5) はんだ付けによるホリウムへの影響は、フロリウム挿入部の大きさ、ホリウム取付位置、はんだ塗りの大きさ、等により異なりますのであらかじめ実使用状態を把握し、異常のないことを確認の上、はんだ付けて下さい。

**MATTERS TO BE NOTED**

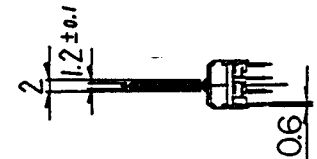
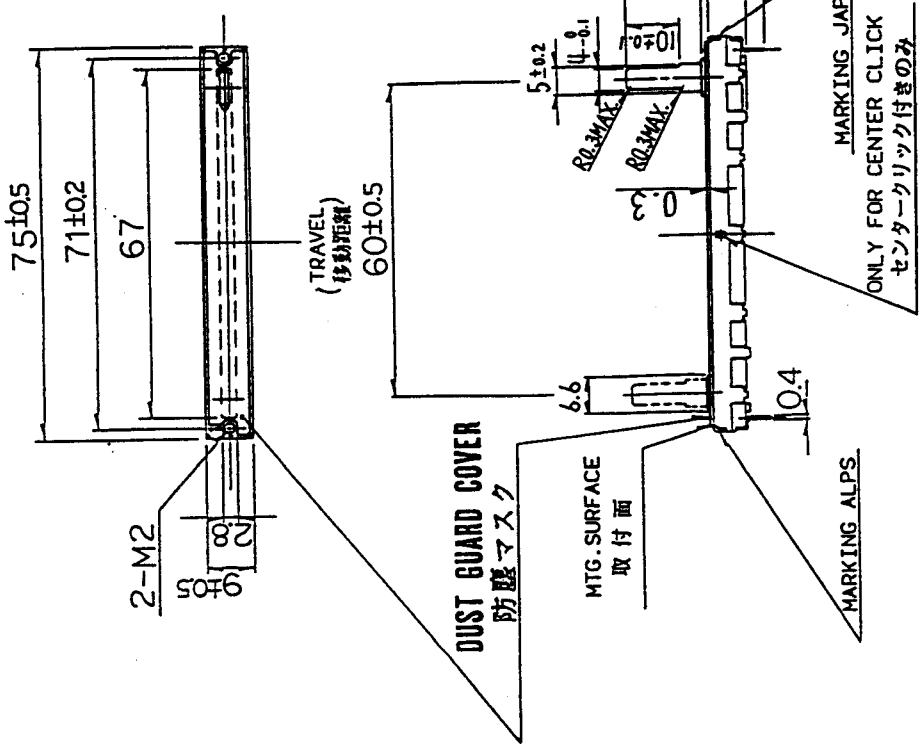
- (1) Do not add any stress on terminals in the case of soldering. For instance, forced movement of potentiometer with terminals being heated may probably deteriorate the electric features due to generation of looseness in connection between resistant board and terminals.
- (2) Avoid use of double-faces 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 1mm 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.



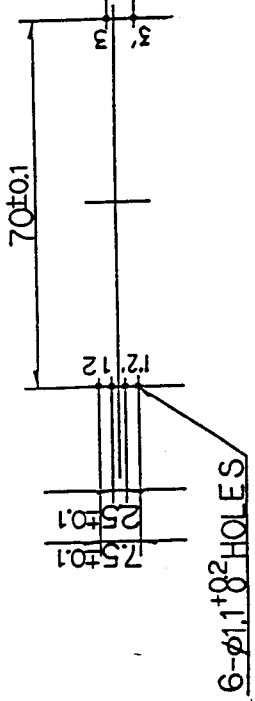
(Fig. 2)

はんだ Solder  
はんだ付け範囲 Soldering area

ALPS ELECTRIC CO., LTD.		TITLE スライト・ホリウム 仕様 SPECIFICATIONS 2/2	
APPD.	DESIGN	DATE	BY
95.7.24	95.7.24	95.7.24	Y.S.
Y.Y.	S.A.	S.S.	
DATE	APPD	CHKD	DSGD
ORIGINAL	41-9-3	Y-Y	S.A.
SYMB	DATE	APPD	CHKD
4S0001-201		OR	



MOUNTING HOLE DETAIL 取付穴寸法図  
(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	PN 登録	WITH CENTER CLICK センタークリック付き	PN 登録
25	S6028P686A	70.3.12	S6028P687A	..
26	S6028P654A	..	S6028P688A	..
15	S6028P623A	70.3.28	S6028P689A	..

ALPS ELECTRIC CO., LTD.		SCALE	
UNIT		mm	
APPD.	CHIKD.	DISCD.	
May 10 1989	May 10 1989		
DATE	DATE	DATE	DATE
SYMB.	SYMB.	SYMB.	SYMB.
ZONE	ZONE	ZONE	ZONE
ANGULAR DIMENSION 角寸 ± 5°	TOLERANCES UNLESS OTHERWISE SPEC		
100 ≤ L	BASIC DIMENSIONS TOLERANCE		
± 0.8	L ≤ 10	± 0.3	
± 0.5	10 < L < 100	± 0.5	
± 0.3	100 ≤ L	± 0.8	

FIGURE: SLIDE POTENTIOMETER  
60mm DUAL UNIT  
60形2連スライドポリウム組立図  
DOCUMENT NO. S6028-6311