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Customer: Mouser Electronics, Inc

No. : SS-2020-9006

Date: Jan. 28, 2020

Attention:

Your Ref.No.:

Your Part No.: RSA0K12A9

SPECIFICATIONS

ALPS Model : RSA0K12A9

ALPS Spec.No. :

ALPS Sample No. : ００２６３９４２５８

RECEIPT STATUS

RECEIVED

By. Date

Signature

Name

Title

ALPSALPINE

ALPSALPINE CO.,LTD.

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S P E C I F I C A T I O N S

1. THIS SPECIFICATIONS APPLY TO RSA0K12A9 POTENTIOMETER

2. CONTENTS OF THIS SPECIFICATIONS.
   5SA02M0018
   5S0001-33
   5S0001-36
   SA02MA911

PRELIMINARY copy.

3. MARKING
   ・MARKING ON ALL UNITS
   DATE CODE,RESIST. VALUE,TAPER

4. REMARKS

・CAUTION

1.For the export of products which are controlled items subject to foreign and domestic export laws and regulations, you must obtain approval and/or follow the formalities of such laws and regulations.

2.Products must not be used for military and/or antisocial purposes such as terrorism, and shall not be supplied to any party intending to use the products for such purposes.

3.Unless provided otherwise, the products have been designed and manufactured for application to equipment and devices which are sold to end-users in the market, such as AV (audio visual) equipment, home electric equipment, office and commercial electronic equipment, information and communication equipment or amusement equipment. The products are not intended for use in, and must not be used for, any application of nuclear equipment, driving control equipment for aerospace or any other unauthorized use.
With the exception of the above mentioned banned applications, for applications involving high levels of safety and liability such as medical equipment, burglar alarm equipment, disaster prevention equipment and undersea equipment, please contact an Alps sales representative and/or evaluate the total system on the applicability. Also, implement a fail-safe design, protection circuit, redundant circuit, malfunction protection and/or fire protection into the complete system for safety and reliability of the total system.

4.Before using products which were not specifically designed for use in automotive applications, please contact an Alps sales representative.

5.Please store the product without open package, keep same condition as delivery, under normal temperature and humidity, prevent direct sunlight, and corrosive gas exposure then use product as soon as you can within about six months after delivery. Once you opend package, please use plastic bag which is used for packaging and prevent product from exposure of outside air then store the product under same condition as above.

6.Any characteristic and condition for test or measurement are not mentioned on this document should be examined by each product number in order to specify them.
If it is necessary, please contact our sales representative.
In case if you use this product under different condition from the past or introduce this product to your another model, please confirm in advance all the content of this product specification is appropriate.

CLASS No.	TITLE MASTER TYPE POTENTIOMETER(SLIDE)	

1. Environment 一般事項

1.1 Operating temperature range 使用温度範囲 : −10~60°C

1.2 Storage temperature range 保存温度範囲 : −30~70°C

1.3 Test conditions 試験条件

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests is as follows.

Ambient temperature : 5°C to 35°C
Relative humidity : 45% to 85%
Air pressure : 86kpa to 106kpa.

If there is any doubt about the results, measurements shall be made within the following limits.

Ambient temperature : 20±2°C
Relative humidity : 60% to 70%
Air pressure : 86kpa to 106kpa.

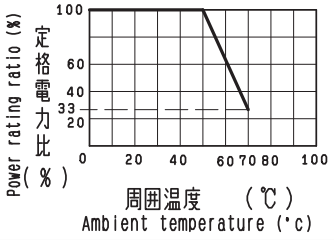
試験及び測定は特に規定がない限り温度5~35℃，相対湿度45~85%，気圧86~106kpaの標準状態のもとで行う。
ただし，判定に疑義を生じた場合は温度20±2℃，相対湿度60~70%，気圧86~106kpaにて行う。

2. Appearance 外観

The potentiometer shall be well done and not have any excessive rust, crack, split, poor plating and discolor in any portion.

各部の仕上げは良好で機能上有害なサビ、キズ、ワレ、メッキ不良及び剥離などがあってはならない。

3. Electrical characteristics 電気的性能

	Item 項 目	Conditions 条 件	Specifications 規 格
3.1	Nominal total resistance and tolerance 公称全抵抗値および許容差	Measurement shall be made by the resistance between terminal 1 and 3 with lever setted at terminal 1 or 3. レバーを端子1又は、3の終端におき、抵抗器の端子1−3間の抵抗値を測定する。	10kΩ±20%
3.2	Power rating 定格電力	Power rating is based on continuous full load operation at the maximum voltage between terminals 1 and 3. Power rating vs. ambient temperature shall be denoted on the following graph. 端子1と3の間に連続負荷することが出来る最大電力。周囲温度に対する，電力軽減曲線は右図とする。 	0.25W
3.3	Rated voltage 定格電圧	Rated voltage 定格電圧 $E=\sqrt{PR}$ (V) P: Power rating 定格電力 (W) R: Nominal total resistance 公称全抵抗値(Ω) When the rated voltage exceeds the maximum operating voltage, the maximum operating voltage shall be the rated voltage. ただし， 定格電圧が最高使用電圧を超える場合は，この最高使用電圧を定格電圧とする。	Maximum operating voltage 最高使用電圧 D.C. 20V A.C. 350V
3.4	Resistance law (Taper) 抵抗変化特性	Measurement shall be made by the resistance law method. 電圧法にて測定する。 Measurement shall be made at the position of right diagram from the edge at the side of terminal 1. When based on terminal 3. from the edge at the side of terminal 3. $\frac{\text{output voltage between terminals 1 and 2}}{\text{Applied voltage between terminals 1 and 3}}$ X100(%) $\frac{\text{1−2端子間出力電圧}}{\text{1−3端子間印加電圧}}$ X100(%)	TAPERED CURVE "D" (SDS23)

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通−設計試作 '02-03-28 大 矢	通−設計試作 '02-03-28 斎 藤	通−設計試作 '02-03-27 清 水

TITLE
SPECIFICATIONS

DOCUMENT NO.
5SA02M0018 (1/5)

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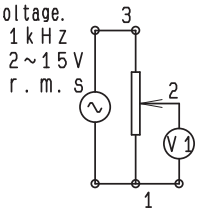
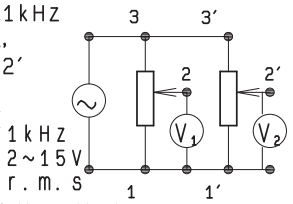
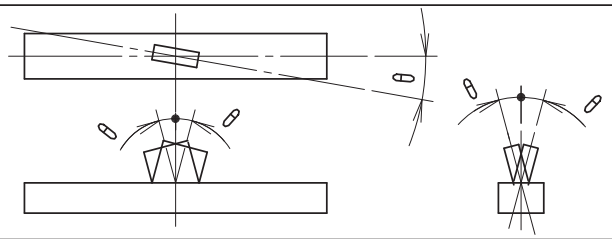
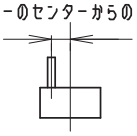
	Item 項 目	Conditions 条 件	Specifications 規 格
3.5	Attenuation and insertion loss 最大減衰量と挿入損失	The attenuation and insertion loss at each end of lever travel shall be measured. しゅう動子を移動距離の各終端に置いたとき 最大減衰量，挿入損失を測定する。 The voltage of 2V r.m.s. to 15V r.m.s shall be applied between terminal 1 and 3 by measuring frequency at 1kHz. The output voltage shall be measured between terminals 1 and 2 and between teriminals 2 and 3. If there is not any doubt about the results, D.C. voltage shall be used as the test voltage. 端子1－3間に1kHzで2～15V（正弦波実効値）の電圧を加え、端子1－2間，端子2－3間の出力電圧を測定する。 なお、判定に疑義が生じなければ、試験電圧として直流を用いても良い。  Input impedance of the voltmetor : 10MΩ or more. 電圧計の入力インピーダンスは10MΩ以上	Attenuation 最大減衰量 100dB or more 以上 Insertion loss 挿入損失 within 0.1dB 以内
3.6	Noise しゅう動雑音	20 V d.c., when the rated voltage is 20 V or less, its rated voltage shall be applied to the terminals between 1 and 3. And then the noise shall be measured by the specified speed. For other procedures, refer to IEC 393-1-4.15 . Traveling speed:20 mm/sec. 端子1－3間に直流電圧20V（定格が20V以下の時は，その電圧）を加え、レバーを20mm／秒の速さで移動させ、このときに発生する雑音電圧を測定する。その他 JIS C 5261 A 法による。	Less than 47 mV p-p 未満 Exclude the pop-noise in the travel area 5mm from the end of the term.1.This condition shall also apply to the products after the durability test 端子1側末端より5mm以内のﾎﾟｯﾉｲｽﾞは無視。耐久性能試験後も含む。
3.7	Insulation resistance 絶縁抵抗	A voltage of 250 V d.c. shall be applied for 1 min., after which measurement shall be made. D.C.250Vの電圧を1分間印加して測定。	Between individual terminals and frame/lever Between adjacent terminals 100 MΩ or more. 端子－レバー間、端子－枠間 独立した抵抗素子の端子間 100 MΩ 以上
3.8	Dielectric strength 耐電圧	Trip current : 2 mA Measuring frequency : 50/60 Hz 250 V a.c. r.m.s. for 1 min. A.C.250Vr.m.s.1分間。 感度電流 : 2 mA（周波数 : 50/60 Hz）	Between individual terminals and frame/lever Between adjacent terminals Without damage to parts, arcing or breakdown etc. 端子－レバー間、端子－枠間 独立した抵抗素子の端子間 損傷，アークおよび絶縁破壊を生じないこと。
3.9	Tracking error 相互偏差	The voltage of 2 to 15V r.m.s. shall be applied between terminals 1 and 3 and between terminals 1′ to 3′ by measuring frequency at 1 kHz. The output voltage shall be measured between terminals 1 and 2 and between terminal 1′and 2′ units the first of these shall be the standard one. If there is not any doubt about the results. d.c. voltage shall be used as the test voltage. 端子1－3間，端子1′－3′間にそれぞれ1kHzで2～15V（正弦波実効値）の電圧を加え，前段を基準として端子1－2間，端子1′－2′間の出力電圧を測定する。 なお，判定に疑義が生じなければ，試験電圧として直流を用いてもよい。  Input impedance of the voltmetor : 10MΩ or more. 電圧計の入力インピーダンスは10MΩ以上	3 dB max. between -40 dB to 0 dB

4. Mechanical characteristics 機械的性能

	Item 項　目	Conditions 条　件	Specifications 規　格
4.1	Lever travel レバー移動距離		100 ± 1 mm
4.2	Operating force 作動力	Traveling speed : 20mm/s Operating position : Tip of the lever 移動速度は20mm/秒とする。 操作位置はレバー先端部とする。	0.4 ± 0.3 N
4.3	Lever travel stop strength レバーの移動止強度	A static load of 100N shall be applied at the point 10mm from the mounting plate for both ends in the direction of lever travel for 10s If the lever height is less than 10mm, it shall be measured at the tip of the lever. しゅう動距離の両末端において、取付面より10mmの位置に100Nの力を10秒間加える。 但し、レバー長さ10mm未満の場合は、レバーの先端で測定する。	Without excessive play or poor contact. 著しいガタ及び接触不良を生じないこと。
4.4	Side thrust of the lever レバーの横押し強度	A static load of 20N shall be applied at the point 5mm from the mounted plate in a direction perpendicular to the axial direction for 10s with the potentiometer mounted in assembly conditions. 本体をシャーシに固定し、取付面より5mmの位置にレバー移動方向に対して直角方向に20Nの力を10秒間加える。	Without deformation or breaks in the sliding part and contact part. 操作部及び関連部品に変形、破損がないこと。
4.5	Thrust and tensile lever レバーの押し引き強度	Thrust and tensile static load of 100N shall be applied to the potentiometer in the lever direction for 10s レバーの押し方向及び引張り方向に、100Nの力を10秒間加える。	Without damage such as bad sliding and braking or play in the lever. Electrical characteristics shall be satisfied. レバーのガタ及び破損、しゅう動ムラ等がなく、電気的性能を満足すること。
4.6	Displacement of lever レバーの横振れ	A torsion moment of 25mN·m shall be applied at the lever in a direction perpendicular to the axial direction and then the displacement shall be measured. レバーに25mN·mの曲げモーメントを、移動方向に対して直角に加え レバー先端で測定する。	1.6mmP-P or less 以下
4.7	Lever inclination and torsion レバーの傾き及びねじれ		θ shall be 2° or less. θは2度以下。
4.8	Distance from the center of the lever レバーのセンターズレ	After sliding lever as far as it will go in each direction, the distance from the center of the lever to the middle of the mounting screw hole shall be measured at the both ends. 取付けネジ穴中心に対するレバーのセンターからのずれを、片側ごとに測定する。 	0.5mm or less on each end. 片側 0.5mm以下
4.9	Resistance to soldering heat はんだ耐熱	Bit temperature : 350°C or less Application time of soldering iron : 5 s or less Extensive pressure must not be applied to the terminal. 温度350°C以下。時間5秒以内。 但し、端子に異常加圧のないこと。	Change in total resistance is relative to the value before test:5% without excessive looseness of terminals and failure contact 全抵抗値の変化は初期値の±5%以内。 著しいガタ、接触不良を生じないこと。

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SPECIFICATIONS

DOCUMENT NO.
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5. Endurance 耐久性能

	Item 項　目	Conditions 条　件	Specifications 規　格
5.1	Endurance without load 無負荷 しゅう動寿命	The moving contact, without electrical load, shall be slided from one end stop to the other and returned to its original position extended over 90% or more effective distance. This procedure constitutes 1 cycle. And the moving contact shall be subjected to 600 cycles per hour, a total of 100000±200 cycles (5000 to 8000 continuous cycles for 24 hours.) 無負荷にてレバーを600サイクル/時の速さで有効移動距離の90%以上にわたり、一日連続5000~8000サイクル、合計100000±200サイクル移動させる。	Change in total resistance is relative to the value before test:±15% Noise:less than 150mVp-p Operating force:0.1~0.8N Clause(3),(4)shall be satisfied. 全抵抗値の変化は、初期値の±15%以内 しゅう動雑音は、150mVP-P未満 作動力は、0.1~0.8N その他は、(3項)(4項)を満足すること。
5.2	Cold 耐寒性	The potentiometer shall be stored at a temperature of -30±2°C for 96 hours in a thermostatic chamber. Then the potentiometer shall be taken out of the chamber and its surface moisture shall be removed And then the potentiometer shall be subjected to standard atmospheric conditions for 1 hour, after which measurement shall be made. -30±2°Cの恒温槽中にて96時間放置し、常温常湿中に1時間放置後1時間以内に測定する。 但し水滴は、取り除くものとする。	Change in total resistance is relative to the value before test:±20% Clause(3),(4)shall be satisfied. 全抵抗値の変化は、初期値の±20%以内 その他は、(3項)(4項)を満足すること。
5.3	Dry heat 耐熱性	The potentiometer shall be stored at a temperature of 70±2°C for 240±8 hours in a thermostatic chamber. Then the potentiometer shall be maintained at standard atmospheric conditions for 1 hour, after which measurements shall be made. 70±2°Cの恒温槽中にて240±8時間放置し、常温常湿中に1時間放置後1時間以内に測定する。	Change in total resistance is relative to the value before test:+ 5/-30% Noise:less than 150mVp-p Operating force:0.1~0.8N Clause(3),(4)shall be satisfied. 全抵抗値の変化は、初期値の+5~-30%以内 しゅう動雑音は、150mVP-P未満 作動力は、0.1~0.8N その他は、(3項)(4項)を満足すること。
5.4	Damp heat 耐湿性	The potentiometer shall be stored at a temparature of 40±2°C with relative humidity of 90% to 95% for 96±4 hours in a thermostatic chamber. And its surface moisture shall be removed. And then the potentiometer shall be subjected to standard atmospheric conditions for 1 hour, after which measurement shall be made. 40±2°C相対湿度90~95%の恒温恒湿槽中にて96±4時間放置し、常温常湿中に1時間放置後1時間以内に測定する。 但し水滴は、取り除くものとする。	Change in total resistance is relative to the value before test:+35/-5% Noise:less than 150mVp-p Operating force:0.1~0.8N Clause(3),(4)shall be satisfied. 全抵抗値の変化は、初期値の+35~-5%以内 しゅう動雑音は、150mVP-P未満 作動力は、0.1~0.8N その他は、(3項)(4項)を満足すること。

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SPECIFICATIONS

DOCUMENT NO.
5SA02M0018　(4/5)

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	Item 項　目	Conditions 条　件	Specifications 規　格
5.5	Change of temperature 温度サイクル	The potentiometer shall be subjected to 5 successive change of temperature cycles, each as shown in table below. Then its surface moisture shall be removed. And then the potentiometer shall be subjected to standard atmospheric conditions for 1 hour, after which measurements shall be made. 下記条件で5サイクル試験後、常温常湿中に1時間放置後1時間以内に測定する。 但し水滴は、取り除くものとする。	Change in total resistance is relative to the value before test: ±20% Noise: less than 150mVp-p Operating force: 0.1~0.8N Clause (3), (4) shall be satisfied. 全抵抗値の変化は、初期値の±20%以内 しゅう動雑音は、150mVP-P未満 作動力は、0.1~0.8N その他は、(3項)(4項)を満足すること。

Step 段　階	Temperature 温　度	Duration 時　間
1	-10±3°C	30 min. 30分
2	Standard atmospheric conditions 常温	10~15 min. 10~15分
3	70±2°C	30 min. 30分
4	Standard atmospheric conditions 常温	10~15 min. 10~15分

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TITLE
SPECIFICATIONS

DOCUMENT NO.
5SA02M0018　(5/5)

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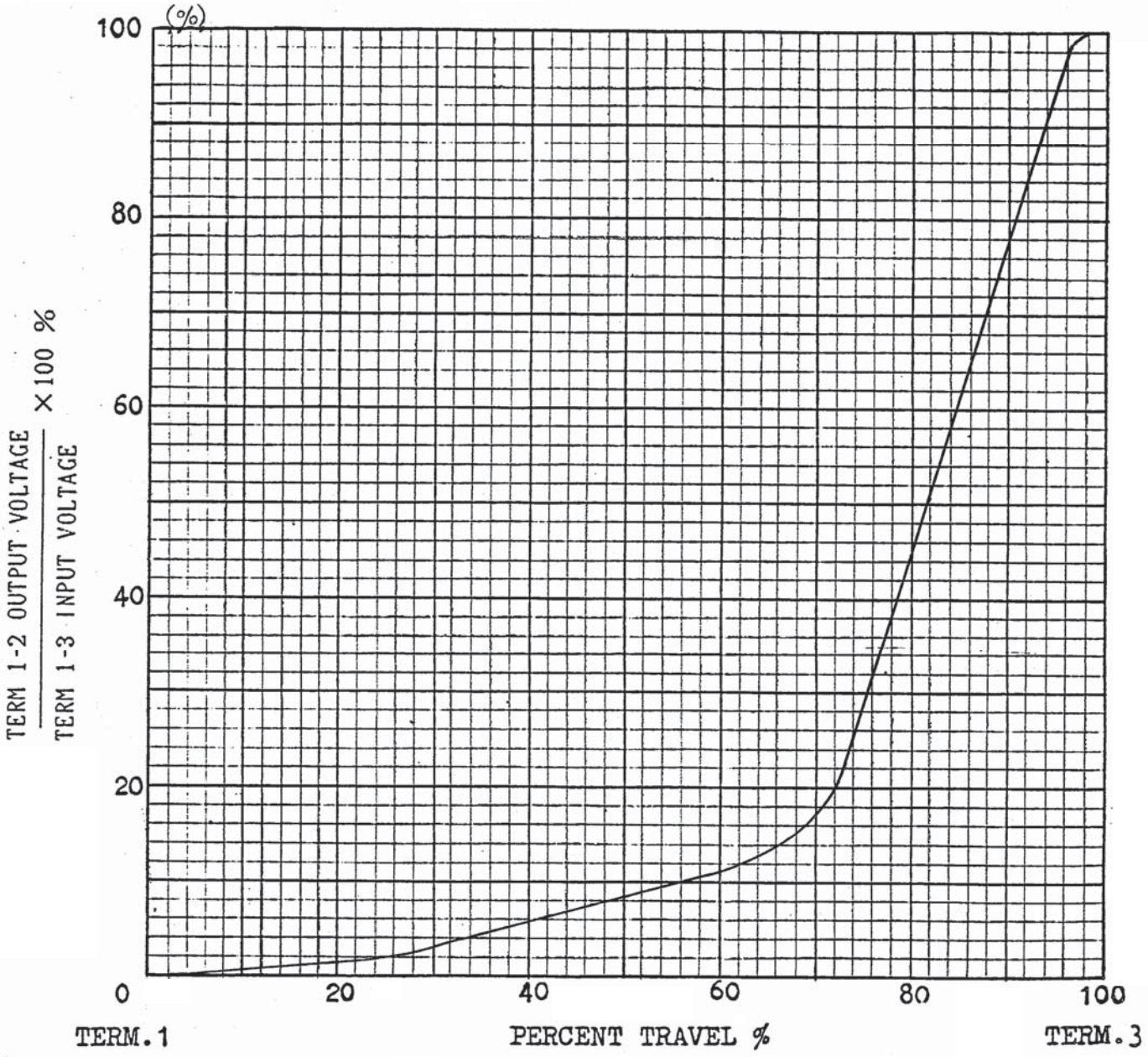
USED ON	NAME
100mm TRAVEL TYPE	RESISTANCE TAPER
ALPSALPINE CO.,LTD.	TITLE SPECIFICATIONS

TAPERED CURVE: "D"



NOTES: PERCENT VOLTAGE

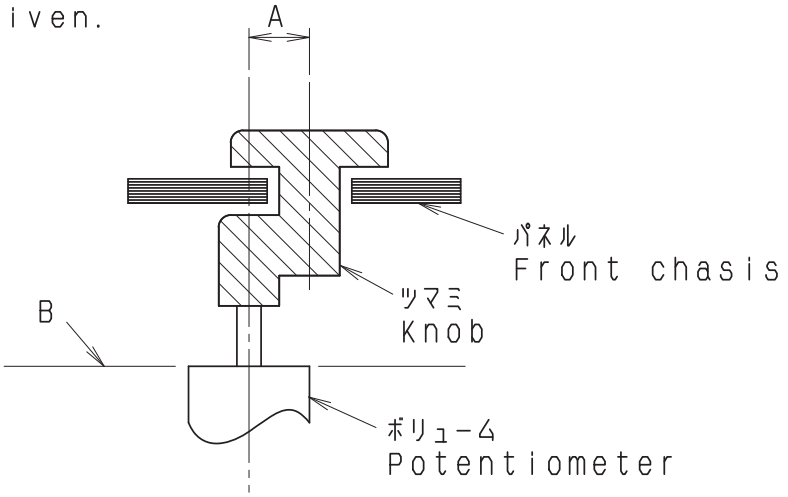
CHECK POINT	TOLERANCE
50 % TRAVEL FROM TERM.1	2 - 15 %

SYMB.	DATE.	APPD.	CHKD.	DSGD.	APPD.	CHKD.	DSGD.	NAME
					Nov. 21.'88 M. Inoue		Nov. 21.'88 S. Sasahi	RESISTANCE TAPER
								DWG.NO. SDS23 0R

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
レバー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．レバー長さについて
レバー長さについては、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。レバー長さについては、作用点までの距離が短いほど
しゅう動感触が良好となり、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．レバー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．ツマミ挿入及びレバー操作は、ボリュームマウント基板に
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.W.B. without worp.

5．電圧調整形回路において出力側のインピーダンスが低い場合には抵抗体と摺動子間の
接触抵抗の影響を受けることがありますのでインピーダンスを公称全抵抗値の１００倍
以上に設定願います。
There is a possibility that might be affected by contact resistance of resistive element and wiper in case of low impedance of output side in voltage regulation circuit.for this reason,we require that you adjust to impedance of output side more than 100 times of total resistance.

SYMB	DATE	APPD	CHKD	DSGD

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APPD.	CHKD.	DSGD.
CENG2(G) '15-11-20 URUSHIHARA	CENG2 '15-11-20 K.SASAKI	CENG2 '15-11-20 SHIMIZU

TITLE スライドボリューム 仕様書
SPECIFICATIONS

DOCUMENT NO. 5S0001-33 (1/2)

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6. 当製品は密閉構造ではありませんので、使用環境によって外部ガスが製品内部に侵入し接点障害を起こす場合があります。
同一セット内に以下の様な部材を使用しないで下さい。
・硫化、酸化ガスを発生する部材（例：ゴム材，接着剤，合板，潤滑剤，梱包材）
・低分子シロキサンガスを発生する部材（例：シリコン系ゴム，潤滑剤，接着剤）
As this product does not have hermetical structure, it is possible gas from outside get inside of product and may cause contact failure depends on using environment.
Please avoid using following materials. If you have to use any of material in parentheses, please pay special attention and confirm it does not influence to products through tests under actual using conditions.
-materials which may generate sulfide gas or oxidized gas.
(rubber, glue, adhesive, plywood, packaging material)
-materials which may generate low-molecular-weight siloxane gas.
(silicone base rubber, lubricant, glue)

7. 高湿度環境下、又は結露する環境下、液体が製品にかかる環境下では、端子間の電流リークが発生する恐れがありますのでご使用にならないで下さい。
Please not to use this product under the atmosphere with high humidity, with possibility of dew condensation or of direct splash of liquid. Because it may cause leak between terminals.

8. ツマミを挿入する際に、レバーに規定荷重以上の力や衝撃荷重が加わると製品が破壊する場合があります。
ツマミの寸法や 挿入治具の圧力管理は、規定荷重以下で挿入できる設定の配慮をお願いします。
The product may have malfunction if excessive stress or impact than specified value is applied when insert knob to the lever.
Please fix appropriate dimension for knob or fix insertion force of knob of mounting equipment which can avoid excessive stress to the product than specified value.

9. 使用温度範囲の上限、下限付近で長期間の連続使用はできません。
動作寿命の規定は常温15℃～35℃、常湿25％～85％の環境条件に限ります。
使用温度範囲の上限、下限付近で長期間の連続動作を行う場合は、機種毎に仕様規定が可能かどうか確認が必要になります。
This product can't be continuously used under high operating temperature or low operating temperature specified in this document.
Unless otherwise specified, the durability is specified only under normal conditions, temperature 15℃ to 35℃ and related humidity 25% to 85%.
When this product is operated at temperature near from upper or lower limit of operating temperature range, feasibility must be examined by each product specification.

10. 製品本体を規定の取付面まで挿入して水平になるように取付けて下さい。
水平にならないまま取付けますと、動作不良の要因となります。
Insert these products to the specified mounting surface and mount them horizontally.
If not mounted norizontally, these products will malfunction.

11. 塵埃が多い環境で使用されますと塵埃が開口部から入り出力不良や動作不良の原因となることがありますのでセット設計時に予めご配慮ください。
If this product is used under dusty conditions, dust or debris may get inside of product from openings and possible to cause output failure or malfunction. Please consider protections against dust when surrounding parts of the product are designed.

SYMB	DATE	APPD	CHKD	DSGD

ALPSALPINE CO.,LTD.

APPD.	CHKD.	DSGD.	TITLE	スライドボリューム 仕様書 SPECIFICATIONS
CENG2(2) '15-11-20 URUSHIHARA	CENG2 '15-11-20 K.SASAKI	CENG2 '15-11-20 SHIMIZU	DOCUMENT NO.	5S0001-33 (2/2)

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

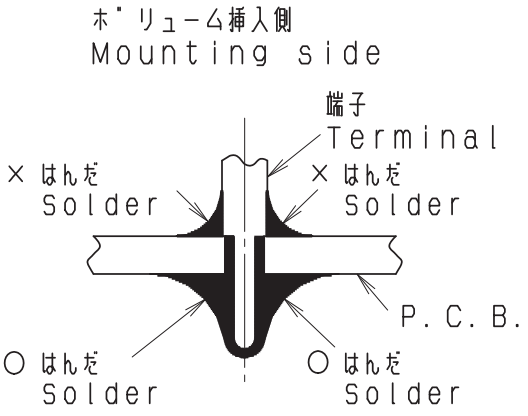
1．はんだ SOLDER
　JIS Z 3282に規定のA30C5はんだを使用
　JIS Z 3282，A30C5

2．使用基板 BOARD IN USE
　片面銅張積層板　板厚 t＝1．6mm ※両面スルーホール基板のご使用はお避け下さい。
　Single-face copper laid laminate board.
　Plate thickness (t)=1.6mm
　Do not use double sided through hole PCB.

3．手はんだ
　はんだ温度　350℃MAX.　時間3秒以内。
　はんだ回数は1回までとする。
　IN THE CASE OF MANUAL SOLDERING
　Solder temperature　:　350℃max.
　Soldering period　:　within 3 seconds.
　Time of soldering　:　only one time is permitted.

4．注意事項 MATTERS TO BE NOTED
（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、かしめ部カ゛タの発生により電気的特性が劣化する恐れがあります。
　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）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、ホ゛リューム挿入側に、はんだが上がらないようにはんだ付けして下さい。（図1）
　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.1)



(Fig.1)
(図 1)

SYMB	DATE	APPD	CHKD	DSGD

ALPSALPINE CO.,LTD.

APPD.	CHKD.	DSGD.
CENG2(G) '15-11-25 URUSHIHARA	CENG2 '15-11-25 K.SASAKI	CENG2 '15-11-25 SHIMIZU

TITLE　スライト゛ホ゛リューム 仕様書
SPECIFICATIONS

DOCUMENT NO.
5S0001-36(1/2)

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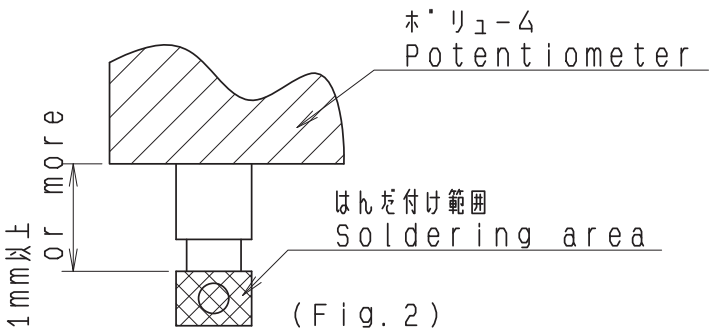
（３）リード配線の場合、ボリューム本体と、はんだ付け部の距離は１mm以上空けて、
はんだ付け願います（図２）
In the case of lead wiring, solder it so that a gap of 1 mm or more may be reserved between the potentiometer body and soldering part.(Fig.2)



(Fig.2)
(図 2)

（４）はんだ付けによるボリュームへの影響は、プリント基板の大きさ、ボリュームの取付け位置、
はんだ槽の大きさ、等により異なりますのであらかじめ実使用状態で実施し、異常のないことを確認の上、
はんだ付けして下さい。
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.

（５）はんだ付け後、溶剤等で製品を洗浄しないで下さい。
After soldering, please not to wash or clean products by liquid such as solvent or any similar.

SYMB	DATE	APPD	CHKD	DSGD

ALPSALPINE CO.,LTD.

APPD.	CHKD.	DSGD.
CENG2(G) '15-11-25 URUSHIHARA	CENG2 '15-11-25 K.SASAKI	CENG2 '15-11-25 SHIMIZU

TITLE スライドボリューム 仕様書
SPECIFICATIONS

DOCUMENT NO. 5S0001-36(2/2)

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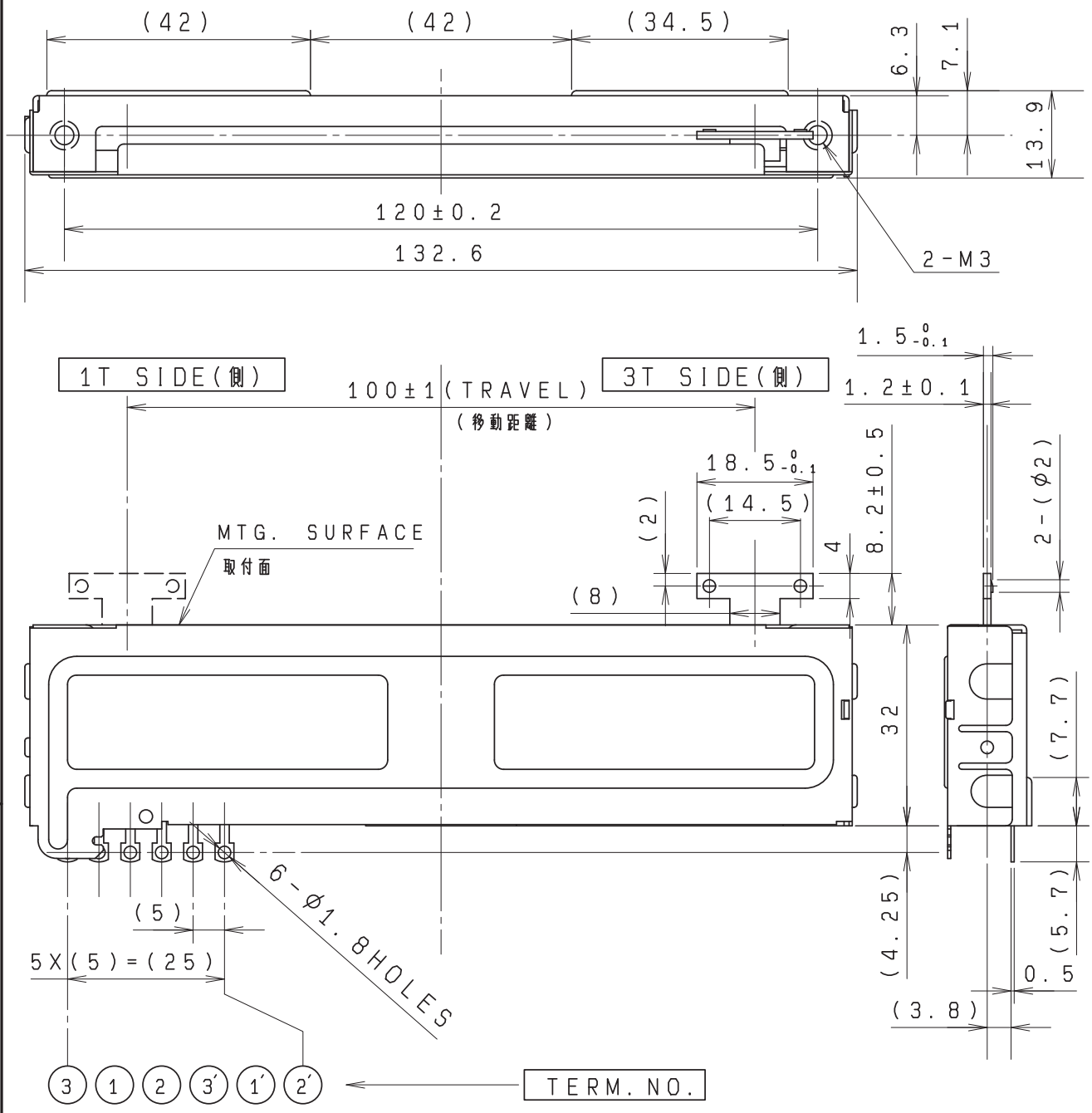

NOTE 1. MOUNTING SCREW THREAD LENGTH SHALL BE CHASSIS THICKNESS +4MM MAX.

1. 取付用ネジの首下長さは、シャーシ板厚＋４mm以下とする。

指定なき部分の許容差 TOLERANCES UNLESS OTHERWISE SPEC	
≦10	±0.3
10＜ ≦100	±0.5
100＜	±0.8
角度 ANGULAR DIMENSION	±5°

PART NO.	NAME	MATERIAL NAME / CODE	FINISH
—	—	—	—

SYMB	DATE	APPD	CHKD	DSGD

ALPSALPINE CO.,LTD.

DSGD. Y.SHIMIZU 2009-11-11	SCALE 1:1	TITLE MASTER TYPE SLIDE POTENTIOMETER 100MM DUAL UNIT
CHKD. R.SUZUKI 2009-11-11		100形 2連 スライドボリューム
APPD. Y.KATO 2009-11-11	UNIT mm	DOCUMENT NO. SA02MA911

NO.

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