Customer:

No. SS-2010-7676

Date: May. 08, 2010

Attention:

Your ref. No.:

Your Part No.:

SPECIFICATIONS

ALPS' ;

MODEL: RS60N1261
(5k BX2)

Spec. No.:

Sample No.: F 9 9 9 2 0 4 5 M

RECEIPT STATUS

RECEIVED

By Date

Signature

Name

Title

ALPS®
ALPS ELECTRIC CO., LTD.

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B6523

Q1003#03A (EA)

No. SS-2010-7676

SPECIFICATIONS

1.THIS SPECIFICATIONS APPLY TO RS60N1261 POTENTIOMETER.

2.CONTENTS OF THIS SPECIFICATIONS.

5S602R-003
4S0001-200
4S0001-202
S602RP102

3.MARKING

• MARKING ON ALL UNITS

DATE CODE,RESIST. VALUE,TAPER

• NOTES

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

• 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.The products shall be stored in the original packaging and kept at room temperature and humidity, out of direct sunlight, and away from any and all corrosive gas. The products shall be completely used as soon as possible, but no later than 6 months from the date of delivery.

Once product packaging is opened, the complete quantity of such products shall be promptly used.

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 test is as follows,
Ambient temperature : 5°C to 35°C
Relative humidity : 45% to 85%
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 ～ 106 kPaの標準状態のもとで行う。

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

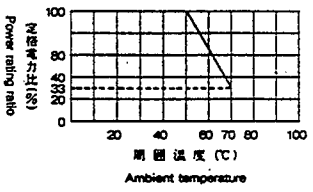
ただし, 判定に疑義を生じた場合は 温度20± 2℃, 相対湿度60～70%, 気圧 86 ～ 106 kPaにて行う。

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 公称全低抗値および許容差	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。	5 10 20 50 100 200 250 500 ±20% (KΩ)
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できる最大電力。周囲温度に対する電力軽減曲線は右図とする。  	B　0.2 W ← A,C,D,K　0.1 W
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越える場合は, 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 B : A,C,D,K D.C. 10V : D.C. 10V A.C.200V : A.C.150V
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 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. $\frac{\text{Outputvoltage between terminals 1 and 2}}{\text{Appliedvoltage between terminals 1 and 3}}\times 100(\%)$ $\frac{\text{1−2端子間出力電圧}}{\text{1−3端子間印加電圧}}\times 100(\%)$ $\frac{\text{Outputvoltage between terminals 1 and 2}}{\text{Appliedvoltage between terminals 1 and 3}}$ (dB) $20\log\frac{\text{1−2端子間出力電圧}}{\text{1−3端子間印加電圧}}$ (dB)	Resistance law (Taper) 抵抗変化特性 A,B,C D,K Refer to page 6/6 6/6 ページ参照

SYMB.	DATE	APPD.	CHKD.	DSGD.
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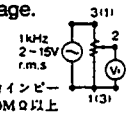
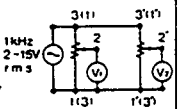
APPD.	CHKD.	DSGD.	TITLE
1技-1G 00.5.12 木村		1技-1G 00.5.12 斎藤	SPECIFICATIONS

DOCUMENT NO. 5S602R-003 (1/6)

CLASS.NO.	TITLE	
	MASTER TYPE POTENTIOMETER(SLIDE)	

	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 2 Vr.m.s. to 15 Vr.m.s. shall be applied between terminal 1 and 3 by measuring frequency at 1 kHz The output voltage shall be measured between terminals 1 and 2 and between terminals 2 and 3. If there is not any doubt about the results, DC 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よい。  電圧計の入力インピーダンスは，10MΩ以上 Input impedance of the voltmeter : 10MΩ or more	Nominal total resistance 公称全低抗値（KΩ） 5≦Ra≦ 10 10＜Ra≦ 50 50＜Ra≦100 100＜Ra≦500 Insertion loss 挿入損失 within 0.1 dB以内	Attenuation 最大減衰量 dB or more 以上 7 0 8 0 9 0 1 0 0
3. 6	Noise しゅう動雑音	DC 20V, when the rated voltage is 20V 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:20mm/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 5261A法による。	Nominal total resistance 公称全低抗値（KΩ） 5≦Ra≦ 50 50＜Ra≦500	mVP-P 未満 4 7 8 5
3. 7	Insulation resistance 絶縁抵抗	A voltage of 250V DC shall be applied for 1 min., after which measurement shall be made. D.C.250Vの電圧を印加して測定。（1分間）	Between individual terminals and frame/lever Between adjacent terminals 端子－レバー間 端子－ 枠 間 独立した抵抗素子の端子間	100MΩ or more 以上
3. 8	Dielectric strength 耐電 圧	Trip current : 2mA Measuring frequency : 50/60Hz 250V AC for 1 min. A.C.250Vr.m.s. 1 分間。 感度電流 2 mA（周波数50/60Hz）	Between individual terminals and frame/lever Between adjacent terminals	Without damage to parts, arcing or breakdown etc. 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 Vr.m.s. to 15 Vr.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 terminals 1'and 2'(for the C and RD taper, the measurement shall be made between terminals 2 and 3 and between terminals 2'and 3' units the first of these shall be the standard one. If there is not any doubt about the results, DC 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（3端子基準の場合は，端子2－3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よい。  電圧計の入力インピーダンスは，10MΩ以上 Input impedance of the voltmeter : 10MΩ or more	At 50% of lever travel 移動距離の50%の位置 ~~dB～ dB~~ ~~± dB~~ ~~dB～ dB~~ ~~± dB~~ ~~dB～ dB~~ ~~± dB~~	± 2 dB

SYMB.	DATE	APPD.	CHKD.	DSGD.
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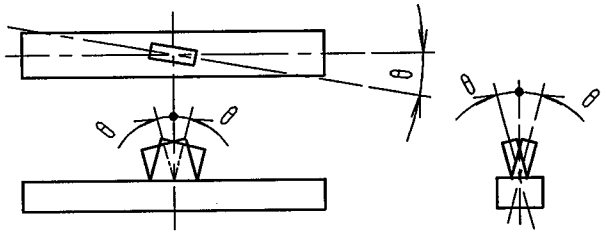
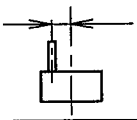
APPD.	CHKD.	DSGD.	TITLE
1技-1G 00.5.12 木村		1技-1G 00.5.12 斎藤	SPECIFICATIONS

DOCUMENT NO. 5S602R-003 (2/6)

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		60 ± 0.5mm
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。	0.4N $^{+0.5}_{-0.35}$ N
	Starting force 始動力	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。	Operating force + 1N MAX. 作動力 + 1N 以下
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 5mm from top surface of the case for both ends in the direction of lever travel for 10s. しゅう動距離の両末端において、枠上面より5mmの位置に100Nの力を10秒間加える。	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 top surface of the case 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、枠上面より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 50N 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、50N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。	2(2xL/25)mmP-P or less 以下 L=Length of lever レバー長さ
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事。	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事。

SYMB	DATE	APPD	CHKD	DSGD
ORIGINAL	2000-05-12	木村		斎藤

ALPS ELECTRIC CO., LTD.

APPD.	CHKD.	DSGD.
通設計試作 02.4.23 大矢	通設計試作 02.4.23 斎藤	通設計試作 02.4.23 清水

TITLE: SPECIFICATIONS

DOCUMENT NO.: 5S602R-003

5. Endurance 耐久性能

Measurement of the endurance characteristics shall be made after 5 cycles' slide of moving contact

耐久性能後の測定は、レバーを5サイクルしゅう動後とする。

	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 30000±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、1日連続5000~8000サイクル、合計30000±200サイクル移動させる。	Change in total resistance is relative to the value before test: ±15% Noise: Refer to Note 1) Operating force: 0.05N~2N 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、 注記 1)による。 作動力は、0.05N~2N 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: Refer to Note 1) Operating force: 0.05N~2N 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、 注記 1)による。 作動力は、0.05N~2N 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 temperature 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: Refer to Note 1) Operating force: 0.05N~2N 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、 注記 1)による。 作動力は、0.05N~2N その他は、(3項)(4項)を満足すること。

SYMB	DATE	APPD	CHKD	DSGD

ALPS ELECTRIC CO., LTD.

APPD	CHKD.	DSGD
1枝-1G '00.5.12 木村		1枝-1G '00.5.12 斎藤

TITLE: SPECIFICATIONS

DOCUMENT NO. 5S602R-003 (4/6)

OR

	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:Refer to Note 1) Operating force:0.05N~2N 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、 注記 1)による。 作動力は、0.05N~2N 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

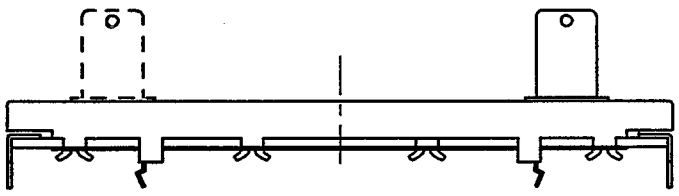
Note 1) For noise specification after the test, erfer to the list below.

注　記 1) 試験後のしゅう動雑音規格は、下表による。

Nominal total resistance 公称全抵抗値(kΩ) 5≦Ra≦50	Nominal total resistance 公称全抵抗値(kΩ) 50<Ra≦500
Less than 150mVp-p未満	Less than 300mVp-p未満

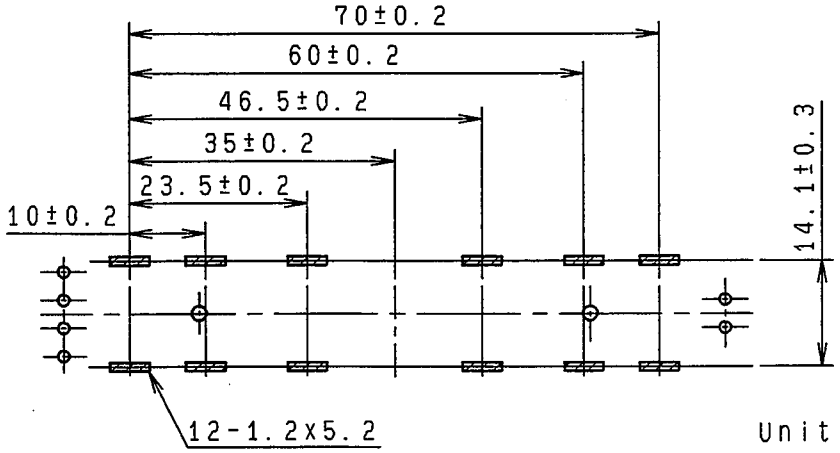
2) Prohibition of pattern wiring for oblique line department.

2) 斜線部は、パターン配線を禁止します。



Viewed from mounting side

挿入側より



Unit:mm

SYMB	DATE	APPD	CHKD	DSGD

ALPS ELECTRIC CO., LTD.

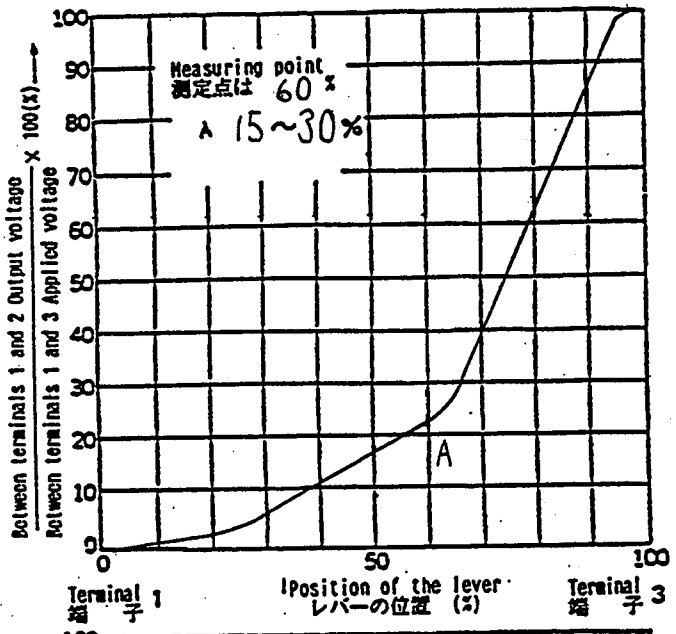
APPD.	CHKD.	DSGD	TITLE
1枝-1G 00.5.12 木村		1枝-1G 00.5.12 斎藤	SPECIFICATIONS

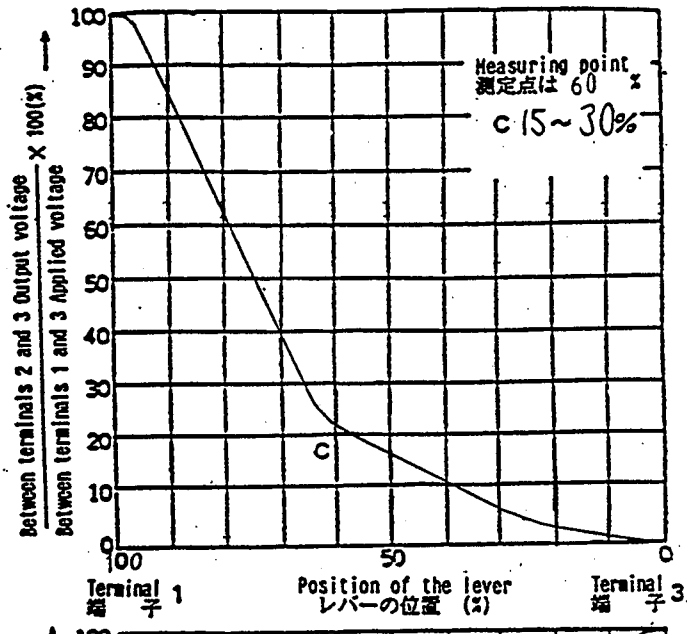
DOCUMENT NO. 5S602R-003 (5/6)

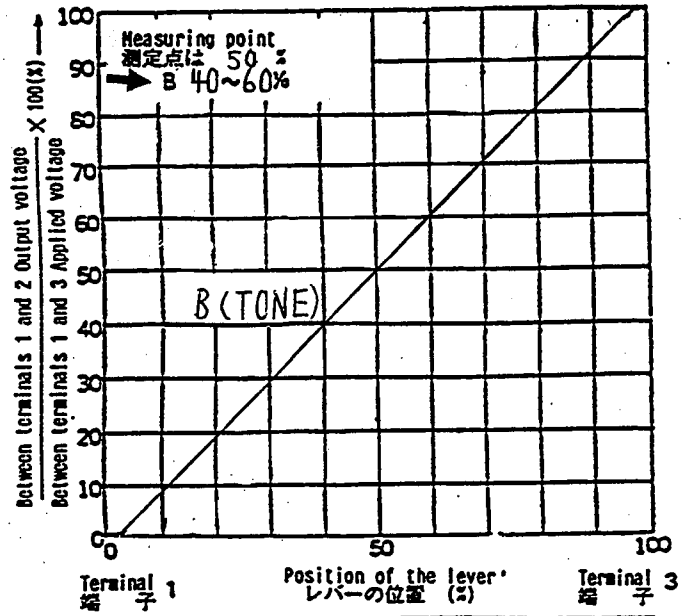
45mm
60mm

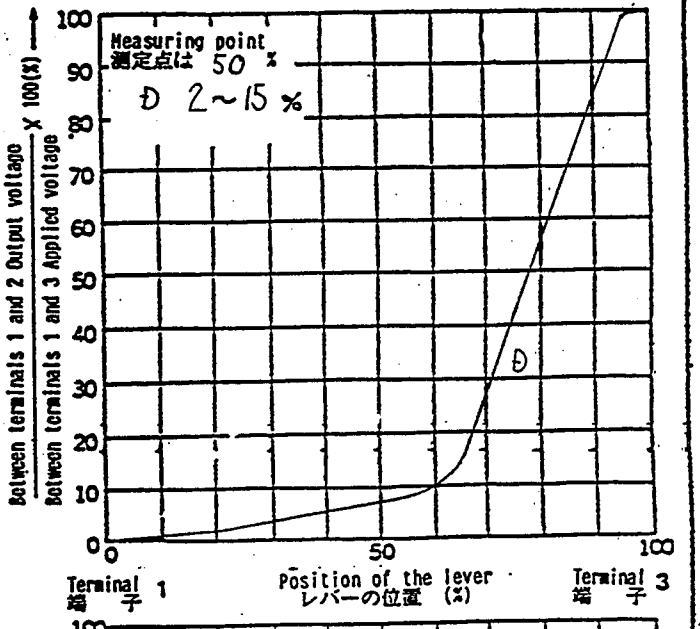
ORI

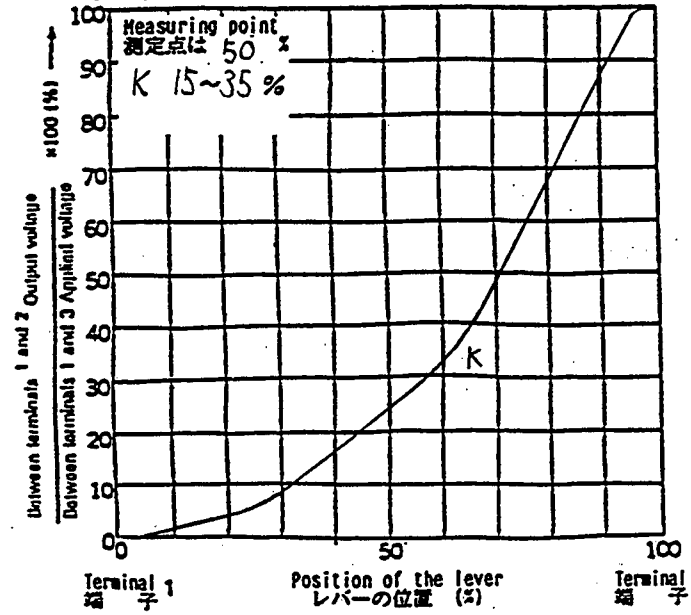
RESISTANCE LAW (TAPER) 抵抗変化特性規格

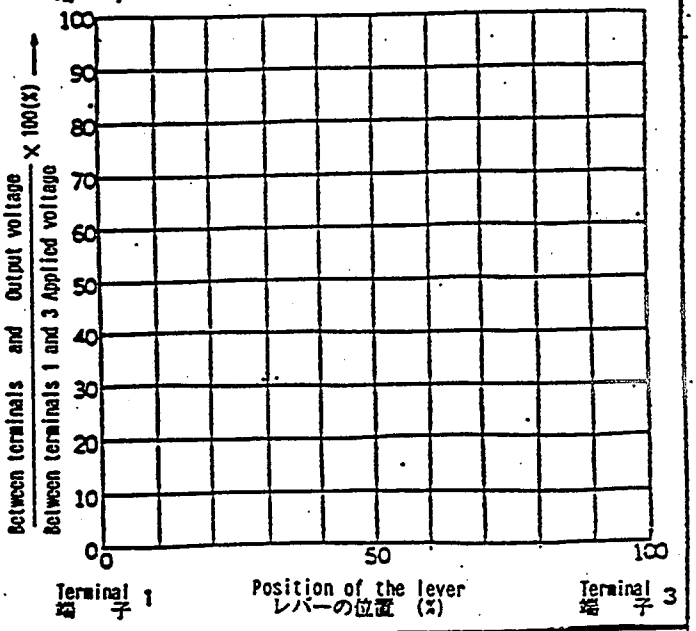










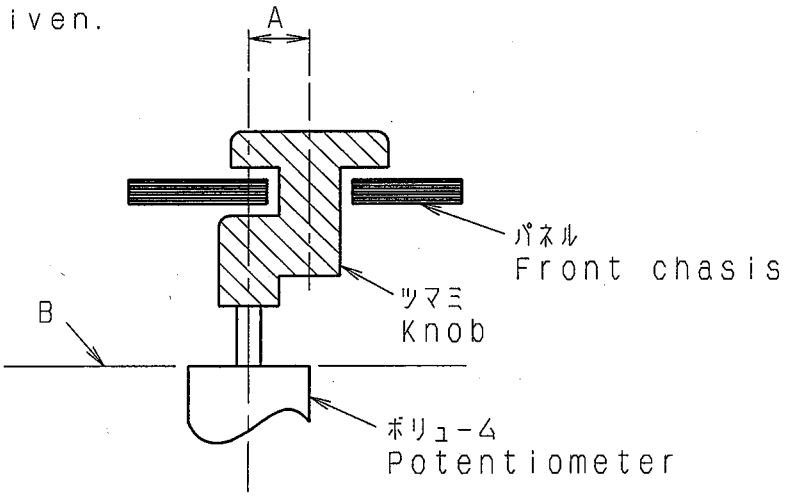


SYMB.	DATE	APPD.	CHKD.	DSGD.	APPD.	CHKD.	DSGD.	TITLE
					Sep.6'91	Sep6'91	Sep.6'91	SPECIFICATIONS
					M. Inoue	K. Matsubara	T. Kumagai	DOCUMENT NO. 5S602R-003 (6/6)

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.C.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.

ORIGINAL	1991-07-03	Y・Y	K・N	S・A
SYMB	DATE	APPD	CHKD	DSGD

ALPS ELECTRIC CO., LTD.

APPD	CHKD	DSGD
通・設計試作 '07.4.5 池之上	通・設計試作 '07.4.5 大矢	通一設計試作 '07.4.5 玉田

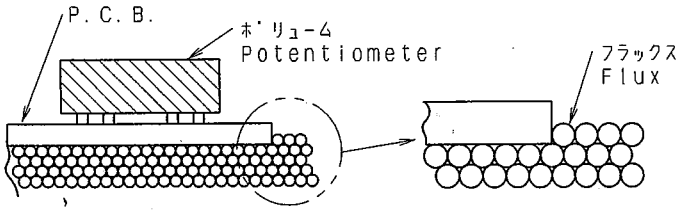
TITLE スライド・ボリューム 仕様書
SPECIFICATIONS

DOCUMENT NO. 4S0001-200

OR

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
   両面スルーホール基板又は、片面銅張積層板　板厚 t=1.6mm
   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>
   (1)レバー位置　センター付近に設定願います。
   (2)フラックス比重　0.83±0.01(発泡式)
   (3)フラックス高さ　プリ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、ボリューム挿入面への流れ込みのないこと。(フラックス上がり、飛散に注意)
   (4)プリヒート温度　100°C max. 時間1分以内. (プリント基板のボリューム挿入側の温度)
   (5)はんだ温度　260°C max. 時間5秒以内、はんだ回数は1回までとする。
   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



(Fig.1)

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

						APPD.	CHKD.	DSGD.
						DESIGN 08.02.25 J.KENOUE	DESIGN 08.02.25 Y.OHYA	DESIGN 08.02.25 Y.TANADA
ORIGINAL	'91-9-3	Y·Y	S·A	S·S				
SYMB	DATE	APPD	CHKD	DSGD				

ALPS ELECTRIC CO., LTD.

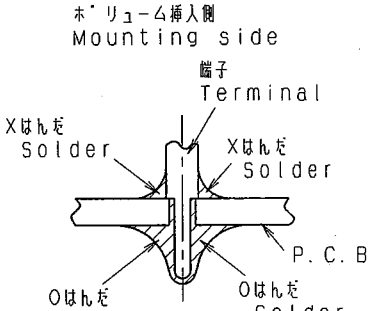
TITLE スライドボリューム 仕様書 SPECIFICATIONS 1/2

DOCUMENT NO. 4S0001-202

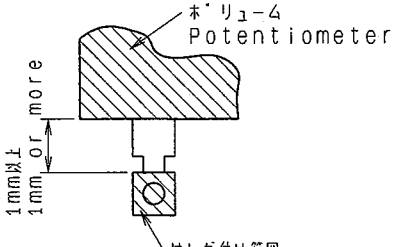
OR

5. 注意事項
   (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、がしめカシタの発生により電気的特性が劣化する恐れがあります。
   (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、ボ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ください。
   (図2)を参照願います。
   (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を1mm以上開けてはんだ付け願います。(図3)
   (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。

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)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)
(3)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)
(4)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 abnomal state under the conditions of soldering to be carried our at present.



(Fig.2)



(Fig.3)

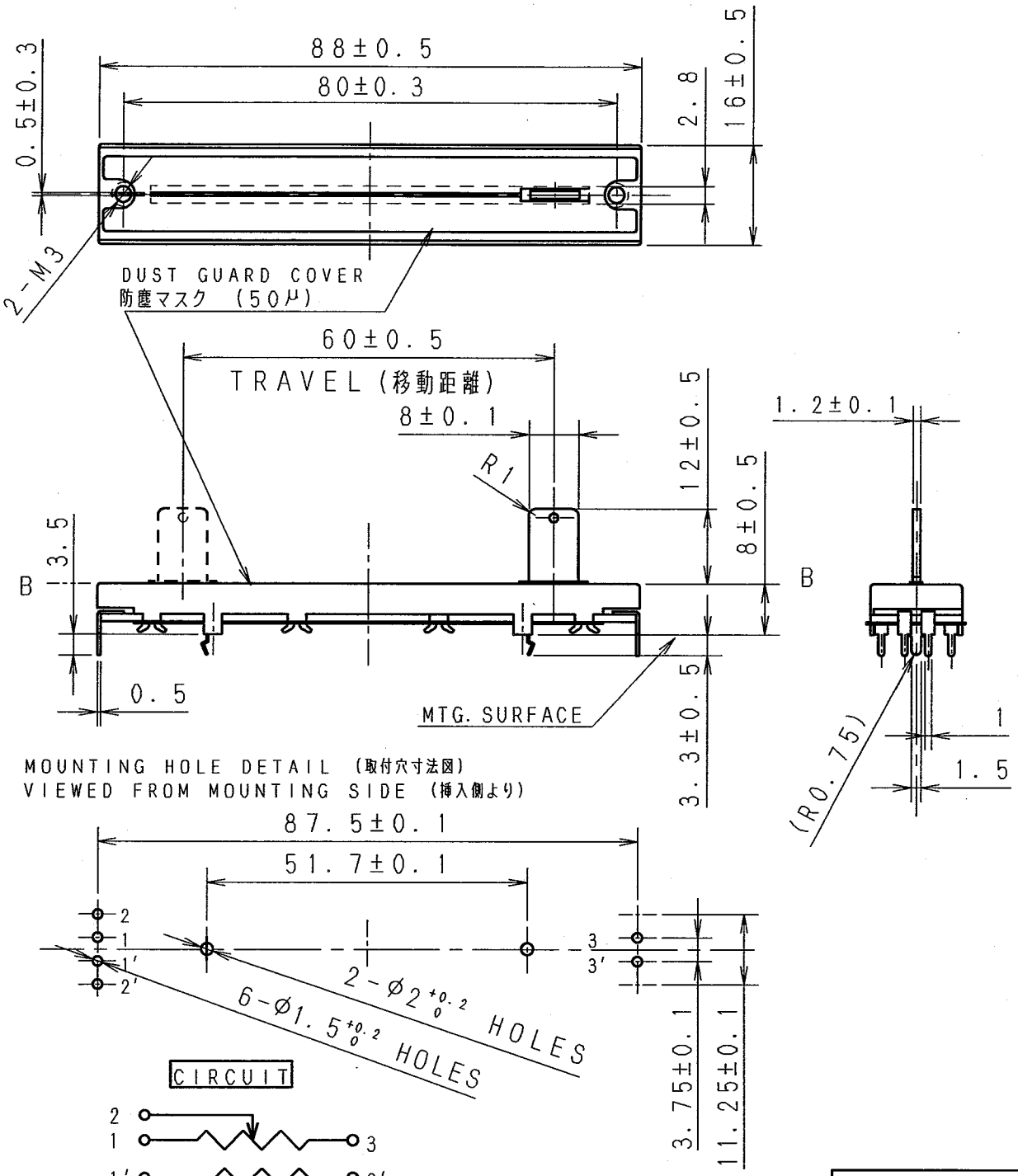
						APPD.	CHKD.	DSGD.
						DESIGN 08.02.25 J.KENOUE	DESIGN 08.02.25 Y.OHYA	DESIGN 08.02.25 Y.TANADA
ORIGINAL	'91-9-3	Y·Y	S·A	S·S				
SYMB	DATE	APPD	CHKD	DSGD				

ALPS ELECTRIC CO., LTD.

TITLE スライドボリューム 仕様書 SPECIFICATIONS 2/2

DOCUMENT NO. 4S0001-202

OR



NOTE 1. Mounting screw thread length is chassis thickness+3mm max.

2. Within 30mm from B included knob's height.

注記 1. 取付ネジの首下長さはシャーシ板厚+3mm以下とする。

2. レバーの長さは、ツマミも含めて30mm以内にてご使用願います。

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

SYMB	DATE	APPD	CHKD	DSGD

Ⓢ 2連 1-12ℓ プリント 防塵マスク付

ALPS ELECTRIC CO., LTD.

DSGD. 1-GROUP3 Y. WATANABE MAR. 17 1999	SCALE 1 : 1	NO. S602RP102
CHKD. J. Kondo Mar. 17 '99		FIGURE 60mm SLIDE POTENTIOMETER SINGLE UNIT 単連スライドボリューム
APPD. [signature] Mar. 17. '99	UNIT mm	RS60N1

1999. 3. 26

OR