

Customer:

No. SW945453 A

ALPS ELECTRIC EUROPA GMBH

Date: Nov. 14 '94

Attention: _____

Your ref. No.: _____

Your Part No.: STSSS9223

SPECIFICATIONS

ALPS' :

MODEL: SSSS92

Spec. No.: _____

Sample No.: F3711052M
SSSS922S-4A1

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 M. Kishi

APP' D T. Maruyama
ENG. DEPT. DIVISION

Sales

SSSS9-S-501

SSSS9 PRODUCT SPECIFICATIONS

Items	Test conditions	Criterion									
5.8 Solderability	<p>Switch shall be checked after following test.</p> <p>(1) Solder : H63A (JIS Z 3282)</p> <p>(2) Flux : Rosin flux (JIS K 5902) having a nominal composition of 25% solids by weight of water white rosin in methyl alcohol (JIS K 1501)solution.</p> <p>(3) Soldering temperature : 230±5℃ Immersing time : 3±0.5 s Flux immersing time shall be 5~10 seconds in normal temperature</p> <p>(4) Immersion depth : Immersion depth shall be at copper plating portion for P.C.B. terminal after mounting. Thickness of P.C. board : 1.6 mm</p>	More than 75% of immersed part shall be covered with solder. If frame is made of tin plate, cutting section shall not be applied.									
5.9 Soldering heat resistance	<p>Switch shall be measured after following test.</p> <p>(1) Solder : H63A (JIS Z 3282)</p> <p>(2) Flux : Rosin flux (JIS K 5902) having a nominal composition of 10% solids by weight of water white rosin in methyl alcohol (JIS K 1501)solution.</p> <p>(3) Temperature and immersing time</p> <table border="1"> <thead> <tr> <th></th><th>Temperature (℃)</th><th>Time (sec.)</th></tr> </thead> <tbody> <tr> <td>Dip Soldering(P.C.B Terminal)</td><td>260±5</td><td>5-9</td></tr> <tr> <td>Hand Soldering(P.C.B Terminal)</td><td>300±10</td><td>5 max</td></tr> </tbody> </table> <p>Above values are applied to the P.C.Board 0.8,1.0,1.2,and 1.6mm thick (In the case of use copper coated single layer phenolic P.C Board) Test is conducted 2 times After first test, Temperature of P.C. Board Should be room temperature.</p> <p>(4) Immersion depth Immersion depth shall be at wiring portion of lead wire for lead wire terminal.</p>		Temperature (℃)	Time (sec.)	Dip Soldering(P.C.B Terminal)	260±5	5-9	Hand Soldering(P.C.B Terminal)	300±10	5 max	No abnormalities shall be recognized in appearance. The electrical performance requirements specified in item 4 shall be satisfied.
	Temperature (℃)	Time (sec.)									
Dip Soldering(P.C.B Terminal)	260±5	5-9									
Hand Soldering(P.C.B Terminal)	300±10	5 max									

6. Durability

Items	Test conditions	Criterion
6.1 Operating life without load	Switch shall be operated 10,000 cycles at 15~20 cycles/minute without load:	<p>Contact resistance (Item 4.1) : 60 mΩ MAX</p> <p>Insulation resistance (Item 4.2) : 10 MΩ MIN</p> <p>Voltage proof (Item 4.3) : Apply 250 V AC for 1 minute. No dielectric breakdown shall occur.</p> <p>Operating force (Item 5.1) : Within ± 10 % of specified value. No abnormalities shall be recognized in appearance and construction.</p>
6.2 Operating life with load	Switch shall be operated 10,000 cycles at 15~20 cycles/minute with 12 V DC 0.1 A. (Resistive load)	<p>Contact resistance (Item 4.1) : 80 mΩ MAX</p> <p>Insulation resistance (Item 4.2) : 10 MΩ MIN</p> <p>Voltage proof (Item 4.3) : Apply 250 V AC for 1 minute. No dielectric breakdown shall occur.</p> <p>Operating force (Item 5.1) : Within ± 10 % of specified value. No abnormalities shall be recognized in appearance and construction.</p>

7. Weather proof

Items	Test conditions	Criterion
7.1 Cold proof	<p>After testing at -20±2℃ for 96 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and then measurement shall be made within 1 hour.</p> <p>Water drops shall be removed.</p>	<p>Contact resistance (Item 4.1) : 60 mΩ MAX</p> <p>Insulation resistance (Item 4.2) : 10 MΩ MIN</p> <p>Voltage proof (Item 4.3) : Apply 250 V AC for 1 minute. No dielectric breakdown shall occur.</p> <p>Operating force (Item 5.1) : Within ± 10 % of specified value. No abnormalities shall be recognized in appearance and construction.</p>

						APPD.	CHKD.	DSGD.	TITLE
						M.	S.	June.04'93	
PAGE	SYMB	DATE	APPD	CHKD	DSGD	Kine	Takabaki	Y. Kishi	DRAWING NO.

SSSS9-S-501

SSSS9 PRODUCT SPECIFICATIONS

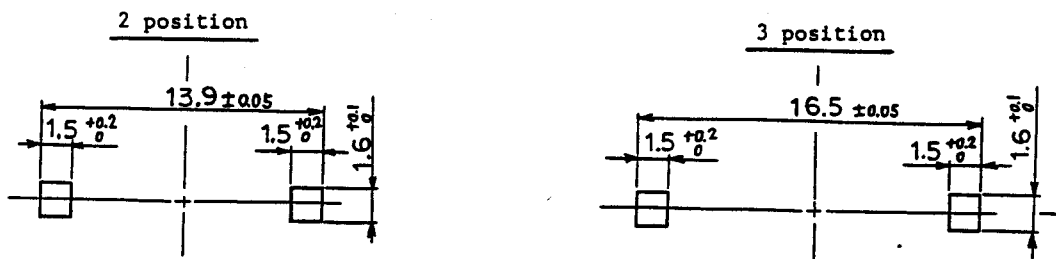
Items	Test conditions	Criterion
7.2 Dry heat	After testing at $85\pm 2^{\circ}\text{C}$ for 96 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and then measurement shall be made within 1 hour.	Contact resistance (Item 4.1) : $60\ \text{m}\Omega\ \text{MAX}$ Insulation resistance (Item 4.2) : $10\ \text{M}\Omega\ \text{MIN}$ Voltage proof (Item 4.3) : Apply $250\ \text{V AC}$ for 1 minute. No dielectric breakdown shall occur. Operating force (Item 5.1) : Within $+10\%$ % of specified value. No abnormalities shall be recognized in appearance and construction.
7.3 Damp heat	After testing at $40\pm 2^{\circ}\text{C}$ and 90~95%RH for 96 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and measurement shall be made within 1 hour after that. Water drops shall be removed.	Contact resistance (Item 4.1) : $60\ \text{m}\Omega\ \text{MAX}$ Insulation resistance (Item 4.2) : $10\ \text{M}\Omega\ \text{MIN}$ Voltage proof (Item 4.3) : Apply $250\ \text{V AC}$ for 1 minute. No dielectric breakdown shall occur. Operating force (Item 5.1) : Within $+10\%$ % of specified value. No abnormalities shall be recognized in appearance and construction.
7.4 Salt mist	Switch shall be checked after following test. (1) Temperature : $35\pm 2^{\circ}\text{C}$ (2) Salt solution : $5\pm 1\%$ (Solids by weight) (3) Duration : $24\pm 1\ \text{h}$ After the test, salt deposit shall be removed in running water.	No remarkable corrosion shall be recognized in metal part.
7.5 Temperature cycling	After 5 cycles of following conditions, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and measurement shall be made within 1 hour after that. Water drops shall be removed. <div style="text-align: center;"> <p>70\pm2$^{\circ}\text{C}$</p> <p>Normal temperature</p> <p>-25\pm3$^{\circ}\text{C}$</p> <p>30 min 30 min</p> <p>10~15min 10~15 min</p> <p>1 cycle</p> </div>	Contact resistance (Item 4.1) : $60\ \text{m}\Omega\ \text{MAX}$ Insulation resistance (Item 4.2) : $10\ \text{M}\Omega\ \text{MIN}$ Voltage proof (Item 4.3) : Apply $250\ \text{V AC}$ for 1 minute. No dielectric breakdown shall occur. Operating force (Item 5.1) : Within $+10\%$ % of specified value. No abnormalities shall be recognized in appearance and construction.

PAGE	SYMB	DATE	APPD	CHKD	DSGD	APPD. M. Kise	CHKD. S. Takahashi	DSGD. June, 04 '93 S. Kishi	TITLE
									DRAWING NO.

Precaution in use

1. Note that if the load is applied to the terminals during soldering they might suffer deformation and defects in electrical performance.
2. Use of water-soluble soldering flux shall be avoided because it may cause corrosion of the switch.

In case of Snap-In type frame, Please refer to following dimension of P.C. Board mounting hole.
(Regarding each terminal hole dimension, refer to dimension of pitch gauge in assembly drawing.)

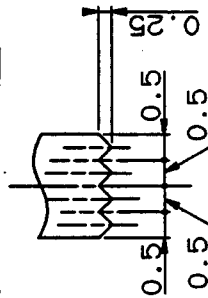


Caution in Automatic Soldering (Applied only to Horizontal Knob type)
Please care ingress of flux from Knob portion, although protected against that from terminals.

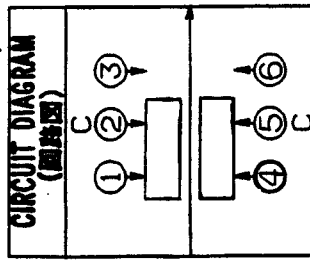
Please consult us when a specific Knob is used, which may cause ingress of flux.

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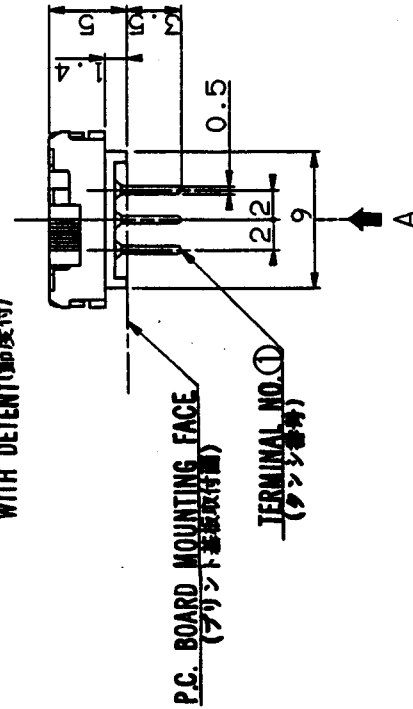
"@"DETAILS (附圖)(5:1)



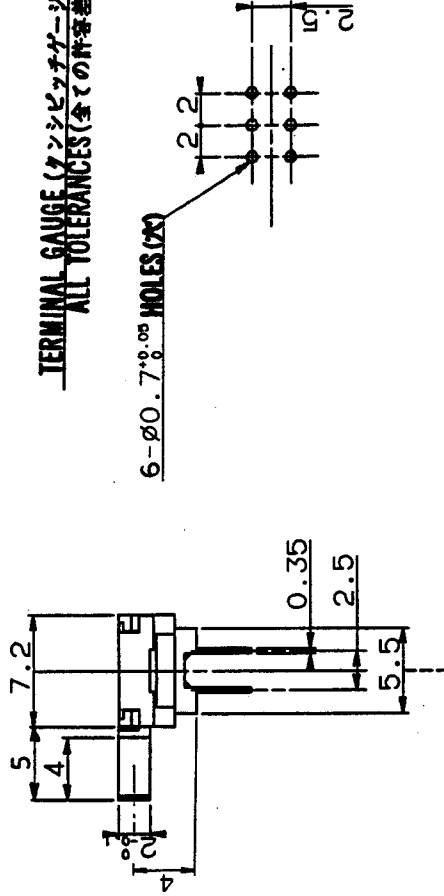
SEE DIRECTION "A"
(A方向より見る)



TRAVEL (移動量)
WITH DETENT (節度付)



TERMINAL GAUGE (クンシピッチゲージ法)
ALL TOLERANCES (全ての許容差) ± 0.05



3. OPERATING FORCE: $3 \pm 1.5 \text{ N} (306 \pm 153 \text{ gf})$ (MEASURE AT THE BOTTOM OF KNOB)
(作動力) (用しツマミ根本に加える)

2. CONTACTS OF CHANGE-OVER TIMING: SHORTING
(接点の切換タイミミング: ショーティング)

NOTES
(注記)

1. PRODUCT SPECIFICATIONS NO: SSS9-S-501
(適用製品仕様書No.)

NOTES

ALPS ELECTRIC CO., LTD.									
MODEL NO. (製品番号)									
SSSS92									
%									
UNIT SCALE									
mm									
APPROX. CHKD. Nov. 14, 94									
Nov. 14, 94									
T. M. Kishi									
PRODUCT DRAWING (製品図)									
DOCUMENT NO. SSSS922S-4A1									
ZONE, STR. DATE, APPRO. CHKD. DISCD.									
DESIGNER: H. K. S. T.									
マルプース電機株式会社									