	LECTRIC EUROPAGMB	H Date: Nov. 14'
Attentio		
Your ref		
Your Par	t No: \$7,\$\$\$ 9223	•
	SPECIFICA	ATIONS
		ALPS':
		MODEL: SSSS 92
		Spec. No.:
		Sample No.:/37//05 SSS 9225-
	RECEIPT STATUS	
	RECEIVED	
	By. Date	
	Signature	
•	Name	
•	Title	
	`	
ALPS EL	ECTRIC CO., LTD.	
		DSG'D m. Kishi
HEAD O	FFICE A-OHTSUKA-CHO.	APP'D T.Maruyama

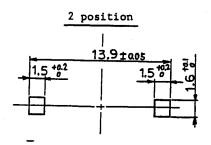
	. <del>.</del>		
SS	559-\$-501	SSSS PRODUCT SPECIFICATIONS	(S)
1.	General		
		specification is applied to low current circuit (Secondary circuit) sli	de switch used for electronic equipment
1.	2 Operating temperat	ure range : -10 ~ 60℃	
1	3 lest conditions	The standard test conditions shall be 5~35°C in temperature, 45~85% RH atmospheric pressure. Should any doubt arise in judgement, tests shall b	and 86~106kPa {860~1060mbar} in
		86~106kPa (860~1060mbar) .	e conducted at 20±2C, 05±5% KH and
	Appearance, construct		
2.	2 Construction and di	n shall have good finishing, and shall have no rust, crack or plating fa	i lures.
2.:	3 Markings Per indi	ividual product drawing	
	Rating <u>12</u> V DC Electrical performance	C_O.1 A (Resistive load)	
7. 1	Items	Test conditions	Criterion
4.1	Contact resistance	Shall be measured at 1kHz±200Hz (20mV MAX , 50mA MAX ) or 1A, 5V DC	3O mΩ HAX
4.2	Insulation	by voltage drop method.  Test voltage: 500 V DC, measured after 1 minute ±5 seconds.	100 10 100
7.6	resistance	Applied position : Between all terminals	100 HQ HIN
		Between terminals and ground (frame)	
4.3	Voltage proof	Test voltage : 500 V AC (50-60Hz, cut-off current 2 mA)	No dielectric breakdown shall occur.
		Applied position : Between all terminals	
4.4	Changeover timing	Between terminals and ground (frame)	
	echanical performance		As per individual product drawing.
	Items	Test conditions	Criterion
5.1	Operating force	A static load shall be applied to the root of actuator in operating	As per individual product drawing.
		direction. The root of actuator	
		<u> </u>	
		·	
5.2	Terminal strength	A static load of 3 N { 306 gf} shall be applied to the tip of	
	10. 21.01. 00. 0.00	terminal in a desired direction for 1 minute. The number of test shall	Shall be free from terminal looseness and damage and breakage of terminal
		be once per terminal.	holding portion. Terminals may be bent
			after test, electrical performance
			requirement specified in item 4 shall be satisfied.
5.3		Timesd shall be sounted at Nom ( kgf cm) by normal	Shall be free from damage of thread
5.4	of thread portion Control strength	(1) A static load of 30 N { 3.06kgf} shall be applied in the	portion.
		operating direction of actuator for 15 seconds.	Shall be free from pronounced wobble, bending and mechanical abnormalities.
İ		(MEASURE AT THE BOTTOM OF KNOR)	
1		(2) A static load of 10N (102 kgf) shall be applied in the pull direction of actuator for 15 seconds.	, in the second
	152	(3) Vertical Knob type A static load of 10 H ( 1.02 kmf) shall be applied to the vert-	
		ical direction of operation at the tip of actuator for 15 seconds.	
		Horizontal knob type 0.51	
		A static load of 5N (5+0 kgf) shall be applied to the vertical direction of operation at the tip of actuator for 15 seconds.	
5.5	Wobble of actuator	Kun-out(P-P) shall be measured by applying a static load of 1N	P-P : knob length 5mm max I rim ma
		(102sf) in the vertical direction of operation at the tip of actuator.	8mm max 2.5 mm ma
5.6	Vibration	Switch shall be secured to a testing machine by a regular mounting	Contact resistance (Item 4.1) :
		device and method.	30 mQ MAX
		(1) Vibration frequency range: 10~55Hz (2) Total amplitude: 1.5mm	Insulation resistance (Item 4.2):
		(3) Sweep ratio: 10-55-10(Hz) Approx. 1 minute	100 MΩ MIN Voltage proof (Item 4.3):
		(4) Method of changing the sweep vibration frequency : Logarithmic or	Apply 500 V AC for 1 minute.
		(5) Direction of vibration : Three vertical directions	No dielectric breakdown shall occur.
		including actuator.	Operating force (Item 5.1):  Within specified value.
		(6) Time : 2 hours each (6 hours in total)	No abnormalities shall be recognized
5.7	Mechanical shock	Switch shall be measured after following test.	in appearance and construction.
	Jan Silven	(1) Hounting method: Normal mounting method	Contact resistance (Item 4.1):
		(2) Acceleration: 490m/s <sup>2</sup> { 50G }	Operating force (Item 5.1)
		(3) Duration : 11ms (4) Test direction : 6 directions	Within specified value.
		(5) Number of shock : 3 times per direction	Shall be free from mechanical abnormalities.
		(18 times in total)	aunormalities.
		APPD. CHKD. DSGD.	TITLE
		V4 1 May 31.99 T. M   T. M   M.K   S. A. A. A. C.	DPAUTIC NO
<b>/</b>	ALPS ELECTRIC CO.,	PAGE SYMB DATE APPD CHED DSGD Fig. 7 Land 12 de	ikc   1/4)
-	. الما بالمالياتيات به معدد	LIV	

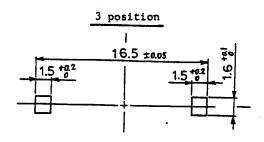
<u>.s</u>	SSS9-S-501	SSSS PRODUCT SPECIFICATIONS		
	Items	Test conditions	T	C-ita-i-
5.8	Solderability	Switch shall be checked after following test.	14 11	Criterion
1	20100.251110	(1) Solder: H63A (JIS Z 3282)	Hore than	75% of immersed part shall
1				ed with solder. If frame is
j		(2) Flux : Rosin flux (JIS K 5902) having a nominal composition of 25%	■ade of t	in plate, cutting section
1		solids by weight of water white rosin in methyl alcohol		be applied.
1		(JIS K 1501) solution.		
İ	1	(3) Soldering temperature : 230±5°C	Ī	
1		Immersing time: 3±0.5 s	1	
		Flux immersing time shall be 5~10 seconds in normal temperature	İ	
1		(4) Innersing time shall be 3-10 seconds in normal temperature		
1		(4) Immersion depth: Immersion depth shall be at copper plating	l	
	1	portion for P.C.B. terminal after mounting.	l	
1	1	Thickness of P.C. board : 1.6 mm		
5.9	Soldering heat	Switch shall be measured after following test.	<u> </u>	
	resistance	(1) Solder: H63A (JIS Z 3282)	No abnorm	alities shall be recognized
i	1	(2) Flue + Posts Slue (175 % 5000) 1	in appears	ance. The electrical perform
ł		(2) Flux: Rosin flux (JIS K 5902) having a nominal composition of 10%	ance requ	irements specified in item 4
1	1	solids by weight of water white rosin in methyl alcohol		satisfied.
	1 .	(JIS K 1501) solution.		
1		(3) Temperature and immersing time		
			l	
1	1	Plo Soldaria (C) Time (sec.)	l	
1	J.	Dip Soldering(P.C.B Terminal) 260 ± 5 5 -0	l	
1	ł	Hand Soldering(P.C.B Terminal) 300±10 5 mdx	l	
1		Above values are applied to the	ł	
1	]	$r_{i}$ C, Doard $U_{i}$ S, $I_{i}$ D, $I_{i}$ D and $I_{i}$ C from the $i$ - $I_{i}$	ĺ	
1	1	(III the case of use conner coated	l	
1	]	I Sillyle laver phanolic D C P1\	İ	
ĭ	-	! lest is conducted 2 fimes !		
l	]	After first test Temperature of P C		
1	1	Doard Should be room temperature		
1		(4) Immersion depth Immersion depth shall be at wiring portion of		
⊢—	<u> </u>	lead wire for lead wire terminal.		
l		The second secon		
1				
6. [	Ourability			
	ltems	Test conditions		Criterion
6.1	Operating life	Switch shall be operated 10,000 cycles at 15~20 cycles/minute without	Cambash	
}	without load	load:	Contact re	sistance (Item 4.1) :
1	}		60	
İ				resistance (Item 4.2):
1			<u> 10</u> HS	
İ		·	Voltage pr	oof (Item 4.3):
ł			Apply 2	50 V AC for 1 minute.
	i			ctric breakdown shall occur.
1				force (Item 5.1) :
		,		
			Vithin _	* of specified value.
				lities shall be recognized
6.2	Operation life		in appeara	nce and construction.
0.2	Operating life	Switch shall be operated 10,000 cycles at 15~20 cycles/minute with	Contact re	sistance (Item 4.1) :
	with load	12 V DC O.1 A. (Resistive load)	_80 =9	
				resistance (Item 4.2):
		'	10 HQ	
		<u></u>		
		Ŧ		oof (Item 4.3) :
			Apply 2	50 V:AC for 1 minute.
			No dieler	ctric breakdown shall occur.
			Operating i	force (Item 5.1) :
	٠		Vithin	±48 % of specified value.
				lities shall be recognized
لـــيــا				nce and construction.
7. V	eather proof		uppcai ai	ice and construction.
	Items	Test conditions		Criterion
7.1	Cold proof	After testing at -20±2°C for 96 hours, the switch shall be allowed to	Contact	sistance (Item 4.1):
		stand under normal temperature and humidity conditions for 1 hour, and		
			<u>60</u> ∎0	
1		Water drops shall be removed.		resistance (Item 4.2) :
		·	<u>10</u> μΩ	
				oof (Item 4.3) :
l				50 V AC for 1 minute.
-		<u>†</u>	No diele	tric breakdown shall occur.
1		$oxed{I}_{i}$	Operation	orce (Item 5.1):
ŀ			Office to the last of the last	10 % of specified value.
		$oldsymbol{I}$	# # I CUID	A OI SPECIFIED Value.
J		[ ·	no adhorma!	lities shall be recognized
l	İ	}	in appearan	nce and construction.
1		Į.		
- 1		J		
1		j		
	:- <del></del>	APPD, CHKD. DSGD.	TITLE	
		June,04	'Q3	
		Julie, OT	DRAVING	NO.
		PAGE SYMB DATE APPD CHKD DSGD King Jakobah By Hick	S. DEVATUR	
(12)	ALPS ELECTRIC CO.,	LTD.	<u> </u>	(2/4)

			<b>%</b> (S)		
SS	SS9-S-501	SSSS PRODUCT SPECIFICATIONS			
7.2	Items Dry heat	Test conditions  After testing at 85±2°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.	d EO mQ MAX Insulation resistance (Item 4.2): 10 MQ MIN Voltage proof (Item 4.3): Apply 250 V AC for 1 minute. No dielectric breakdown shall occ Operating force (Item 5.1): Vithin -30 % of specified value No abnormalities shall be recognized in appearance and construction. Contact resistance (Item 4.1): 60 mQ MAX Insulation resistance (Item 4.2): 10 MQ MIN Voltage proof (Item 4.3): Apply 250 V AC for 1 minute. No dielectric breakdown shall occu		
7.3	Damp heat	After testing at 40±2°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.			
	_		Operating force (Item 5.1):  Within % of specified value No abnormalities shall be recognized in appearance and construction.		
	Salt mist	Switch shall be checked after following test.  (1) Temperature: 35±2°C  (2) Salt solution: 5±1% (Solids by weight)  (3) Duration: 24±1 h  After the test, salt deposit shall be removed in running water.	No remarkable corrosion shall be recognized in metal part.		
	Temperature	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.	Contact resistance (Item 4.1): 60 mΩ MAX Insulation resistance (Item 4.2): 10 MΩ MIN Voltage proof (Item 4.3): Apply 250 V AC for 1 minute. No dielectric breakdown shall occur Operating force (Item 5.1): Within		
		Normal temperature -25±3°C  30	No abnormalities shall be recognized in appearance and construction.		
·					
		APPD. CHKD. DSGD.  APPD. & June, 04'	TITLE 93		

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 pitchgauge 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.

							APPD.	CHKD.	DSGD.	TITLE
t							M.	8	June,04'93	
ALDO DI DOTTO VOI DO	PAGE	SYMB	DATE	APPD	CHKD	DSGD	King	Theliali	m. Hishi	DRAVING NO.

