R1399 SERIES			
SPECIFICATION	Page	Page 1 of 5	Pb

1. Style :

This specification describes "Snap-Acting Pushbutton Switches", mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic. Operating Temperature Range $: -30^{\circ}C \rightarrow +85^{\circ}C$.

2. Current Range :

2.1 Silver Plating Standard :

	Rating	
C=Gold over silver	Fixed Terminal : Copper alloy with silver plated over gold plate. Movable contact : Copper alloy with silver plated over gold plate.	100mA,24 VDC

2.2 Gold Plating Standard :

	Rating	
R=Gold	Fixed Terminal : Copper alloy with gold plate over nickel plate. Movable contact : Copper alloy with silver plated over gold plate.	500mA @48VAC Max. 200mA @50VDC Max. 200mA @250VAC Max.

3. Type of Actuation : Snap-Acting Pushbutton Switches.

4. Test Sequence :

EL	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
ECT				There shall be no defects
RIC	1	Visual Examination	By Visual Examination check without	that affect the
C PERFORMANCE	1	Vibuar Examination	and out pressure & testing.	serviceability of the
				product.
	2	Contact Resistance	@2-4VDC 100mA. For both silver and gold plated contacts.	100mΩ Max.

R1399 SERIES SPECIFICATION

Page

Page 2 of 5

Pb

EI	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
ECTRIC PER	3	3 Insulation Resistance Measurements shall be made following application of 1000 V/DC 100mA potential across terminals and cover.		1000MΩ min/1000V.
FORMANCE	4	Dielectric Withstanding Voltage	1500 VAC(50Hz or 60Hz) shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.
MECHANICAL PERFPR	5	 Through Hole Type ■ Wave Soldering : ① Soldering Temperature : 260±5°C. ② Duration of Solder Immersion : 5 ±1 Solder Heat seconds. ③ PCB is 1.6mm in thickness ■ Manual Soldering : ① Soldering Temperature : 350±5°C. ② Duration of Solder Heated : 5±1 		 ①Shall be free from pronounced backlash and falling-off or breakage terminals. ②As shown in item 2~4.
MANCE	6 Actuation Force MODEL-1305N MECHANICAL TEST 500gram, 1000gram, 2000gram. OFF TO ON Total Travel		 ①At for test the force. Force: 2~5N. ②Total Travel: 2.5 mm±0.25 mm 	
OPERATING LIFE	7	Measurements shall be made following the test forth below : ①100mA,24 VDC resistive load - gold over silver plated. Electronics Life Test : 10,000 cycles. ③Electronics Life Test : 500,000 cycles. ③Rate of Operation : 6-8 operation cycle per minute. ④Mechanical Life Test : 1,000,000 cycle		 ①Electronics Life Test : As shown in item 3~4. ②Mechanical Life Test : As shown in item 2~4.

R1399 SERIES SPECIFICATION

Page

Page 3 of 5

Pb

	ITEM	DESCRIPTION	REQUIREMENTS	
	8	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made : $Temperature : -40\pm3^{\circ}C.$ @Time : 96 hours.	As shown in item 2~4.
HUMIDI	9	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made : ①Temperature : 85±3°C. ②Time : 96 hours.	As shown in item 2~4.
TY RESISTANCE	10	Resistance Humidity	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made : ①Temperature : 40±2°C. ②Relative Humidity : 90~95%. ③Time : 96 hours.	As shown in item 2~4.
	Following the test set forth sample shall be left in nor and humidity conditions for before the measurements a ①Temperature : 35±2°C. ②The ratio of salt-water : ③The spray amount of salt ml/h. ④Time : 48 hours.		Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made : ①Temperature : 35±2°C. ②The ratio of salt-water : 5%. ③The spray amount of salt- water : 1~2 ml/h. ④Time : 48 hours.	The testing standard based on bubble, crack, and magnifying glass with gauge.

R1399 SERIES SPECIFICATION

Page

Page 4 of 5 **Pb**

	ITEM	DESCRIPTION		TEST CONDITIONS					REQUIREMENTS	
HU	12	HSF	Refer ROHS Standard : The electronic electrical machinery product limits with six big chemical materials.					Cd : 100ppm Pb : 1000ppm Hg : 1000ppm Cr6+ : 1000ppm PBB, PBDE : 1000ppm		
MIDITY RESIST	13	Test of IP 67	Upper side : Protected against the effects of temporary immersion in water. (1m below the surface of the water for a duration of 30 min)				IP67 According to EN 60529 : 1991+ A1 : 2000 IEC 60529 : 2001			
IANCE	14	WITH LED ELECTRO OPTICAL	Lens Appearance Water Clear	Color Super White Super Red Super Yellow Super Blue Super Pure Green Super Yellow+ Super Green Super Red Super Red+ Super Green	Electro- Vf Typ. 35 20 21 20 35 35 35 20 20 20 20 20 20 20 20 20 20 20 20 20	-optical I (V) 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	Data(AT Iv(n Min. 	20 mA) ncd) Typ. 370 85 50 30 259 500 40 20 35 40 50 13 50 13	Viewing Angle 201/2=** IF=5mA= 0=80* 0=80* 0=80* 0=80* 0=80* 0=130* 0=130*	4.0 Vf(V) Max.

5. WAVE SOLDERING CONDITIONS :





Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.