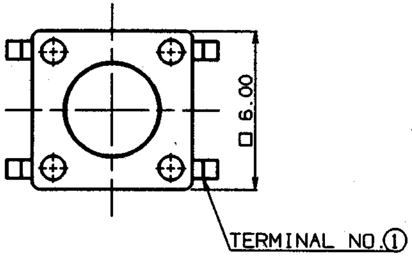
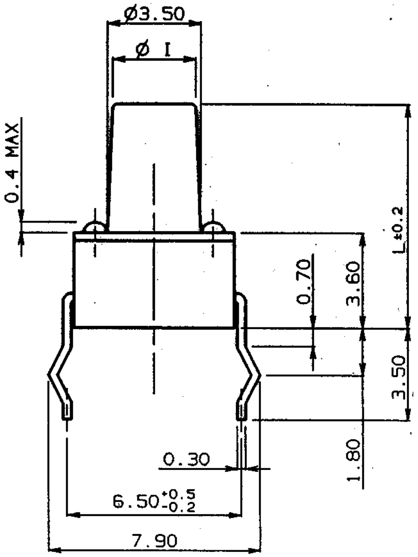
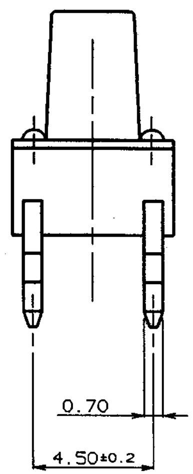


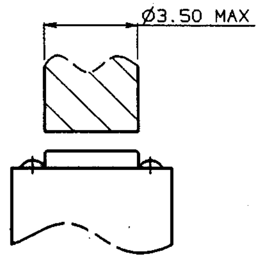
NOTE

1. TRAVEL : 0.25 +0.2/-0.1 mm
2. CONTACT RESISTANCE : 100mΩ Max
3. GENERAL TOLERANCE : ±0.3
4. MANUFACTURING SPECIFICATION WOULD BE ACCORDANCE WITH JT 0102

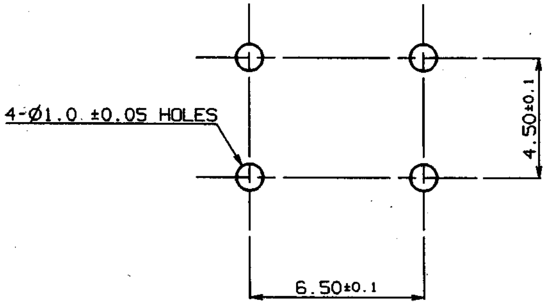
1130	12001000	4.30	3.50	BLACK	160±50gf
1130A	12002000	5.00	3.50		
1130B	12003000	9.50	3.10		
1130C	12004000	8.00	3.20		
1130D	12005000	13.00	2.87		
1130E	12006000	7.30	3.25		
1130F	12007000	7.00	3.30		
1130P	12018000	8.50	3.09		
1130L	12017000	17.00	2.80		
1130H	12008000	4.30	3.50	BROWN	100±30gf ②
1130HA	12009000	5.00	3.50		
1130HB	12010000	9.50	3.10		
1130HC	12011000	8.00	3.20		
1130HD	12012000	13.00	2.87		
1130HE	12013000	7.30	3.25		
1130HF	12014000	7.00	3.30		
1130HP	12016000	8.50	3.09		
1130HL	12015000	17.00	2.80		
1130W	12019000	4.30	3.50	NATURAL	260±50gf
1130WA	12020000	5.00	3.50		
1130WB	12021000	9.50	3.10		
1130WC	12022000	8.00	3.20		
1130WD	12023000	13.00	2.87		
1130WE	12024000	7.30	3.25		
1130WF	12025000	7.00	3.30		
1130WP	12027000	8.50	3.09		
1130WL	12026000	17.00	2.80		





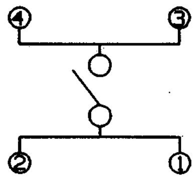


SET MAKER KNOB SIZE (L:4.30mm ONLY)



P.C.B MOUNTING HOLE DIMENSION

CIRCUIT DIAGRAM



No.	PART NAME	Q'TY	MATERIAL	SIZE	TREAT.	REMARKS

NO.	DATE	NOTE	SIGN
⑤			
④			
③			
②	02.03.19	편기4번 변경	
①	99.05.07	REDRAWING ... CODE ...	

3RD ANGLE PROJECTION | UNIT m/m | SCALE 5/1 | APPROVED | CHECKED | DESIGNED

MODEL: JTP 1130 SERIES

DWG. NAME: ASS'Y DIAGRAM

DWG. NO.: CODE No

	SPECIFICATION	PAGE
	TACT SWITCH	1 / 4

1. GENERAL

1.1 Application : This specification is applied to low current circuit tactile switch for electronic equipment.

1.2 Operating temperature range : -20 ~ 70℃, 45 ~ 85% RH

1.3 Storage temperature range : -30 ~ 80℃. However, 96 hours maximum for continuous storage over a range -20 ~ -30℃ and a range 70 ~ 80℃.

1.4 Test conditions : The standard test conditions shall be 5 ~ 35℃ in temperature, 45 ~ 85% RH and 860 ~ 1060mbar in atmospheric pressure. Should any doubt arise in judgement, tests shall be conducted at 20±2℃, 65±5% RH and 860 ~ 1060mbar.

2. RATED VOLTAGE AND CURRENT.

DC 12V 50㎃

3. ELECTRICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
3.1	Contact arrangement		* 1 pole, 1 throw.
3.2	Contact resistance	Measured at DC 5V 100mA or by ohmmeter allowing a small current at 1㎑ with a load of twice of the Actuating force.	* less than 50mΩ.
3.3	Insulation resistance	DC 100V is applied between terminals and between terminals and cover for 1minute ±5seconds.	* greater than 100㏁.
3.4	Dielectric strength	AC 250V (50 ~ 60㎐)is applied between terminals and between terminals and cover for 1 minute.	* No insulation defect shall be observed.
3.5	Bounce	Measured by lightly striking the center of the button stem at a rate of 3 operations/sec…	* less than 10 msec.

						APPD	CHKD	DSGN	TITLE	JTP1130,1230,1236 SERIES
									DOCUMENT NO.	JT 0102LF
ZONE	SYMB	DATE	APPD	CHKD	DSGD					

4. MECHANICAL PERFOMANCE

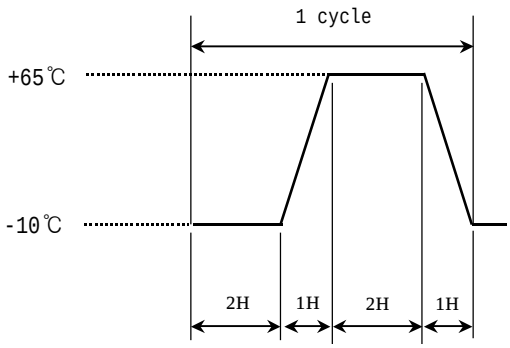
	PROPERTY	TEST CONDITIONS	PERFORMANCE
4.1	Actuating force	A gradually increasing load is applied to the center of the button stem.	* As per individual manufactured drawing.
4.2	Return force	After actuating, the load is gradually decreased until the stem returns to its free position.	* 160gf, 260gf : greater than 40gf. * 100gf, 130gf : greater than 30gf.
4.3	Stop strength	A static force of 3Kgf shall be applied to the direction of operation for 3 seconds.	* Shall be free from mechanical and electrical abnormalities.
4.4	Stem withdrawal force	A static load of 500gf is applied to the direction of pulling for 3 seconds.	* Shall be free from mechanical and electrical degradation.
4.5	Travel		* 0.25 $^{+0.2}_{-0.1}$ mm
4.6	Arrangement of action		* Tactile feed-back.
4.7	Solderability	Test sample switch under the following conditions. 1) Solder bath temperature 240 ± 5℃ 2) Dipping time 3 ± 0.5 sec.	*95% or more of immersion area shall be covered with new solder.

5. DURABILITY

	PROPERTY	TEST CONDITIONS	PERFORMANCE
5.1	Operating life	100,000cycles operation with a load of 150% of Actuating force at a rate of 2cycles/sec. With a resistive load supplying DC 12V 50㎃.	* Contact resistance : 200mΩ max. * Bounce : 20msec max. * Actuating force : within ±30% of the initial value.

						APPD	CHKD	DSGN	TITLE	JTP1130,1230,1236 SERIES
									DOCUMENT NO.	JT 0102LF
ZONE	SYMB	DATE	APPD	CHKD	DSGD					

6. WEATHER PROOF

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.1	Cold heat proof	After testing at -30℃ for 96hours, the sample is allowed to stand under normal temperature and humidity conditions for 1hour and measurement is performed within 1hour after that. Water drops should be wiped off.	* The requirement in item 3 and 4 shall be satisfied.
6.2	Dry heat proof	After testing at 85℃ for 96hours, the sample is allowed to stand under normal temperature for 1hour and measurement is performed within 1hour after that.	
6.3	Damp heat proof	After test at 60±2℃ and 90 ~ 95% in relative humidity for 96hours, the sample is allowed to stand under normal temperature and humidity conditions for 1hour, and measurement is performed within 1hour after that. Water drops should be wiped off.	* Insulation resistance : 10MΩ minimum. * Dielectric strength : same as item 3.4. * Contact resistance : same as item 3.2.
6.4	Thermal cycling	 ; After the test conducted under 5 cycles the sample is allowed to stand under normal temperature and humidity conditions for 1hour, and the measurement is performed within 1hour.	* The requirement in item 3 and 4 shall be met.

7. SOLDERING CONDITIONS

7.1 Manual soldering

7.1.1 Soldering temperature : less than 400℃.

7.1.2 Soldering time : Within 4 seconds

7.2 Automatic soldering

(in case automatic dip soldering is to be used)

7.2.1 Soldering temperature : less than 260℃.

7.2.2 Soldering time : continuous dipping duration shall not exceed 10 seconds.

7.2.3 Permissible soldering times : less than twice.
(The second soldering would be conducted after the temperature goes down to a normal temperature.)

7.2.4 Preheat temperature : less than 110±10 ℃.
(Circumferential temperature of the printed wiring board.)

7.2.5 Preheat time : less than 45 seconds.

7.2.6 Flux streaming : Flux streaming shall be controlled so that it shall not swell beyond the printed wiring board where components are installed.

7.2.7 Other precautions : (1) Flux shall not be applied to the switch terminals and the part mounting surface of the P. W. board before soldering.
(2) Do not wash the switch after soldering.

재 질 증 명 서
(CERTIFICATION OF MATERIAL)

결재	작 성	검 토	승 인

일 자 DATE: 2006년 10월 11일

제품명 ITEM: TACT SWITCH

제품 번호 MODEL No.: JTP-1130 SERIES

상기 제품은 하기재료를 사용하고 있음을 증명합니다.
(The above item is certified to use with following materials.)

No.	구성부품명 (Part name)	원재료(Material)				난연성 (Flame cless)	UL (File No.)	색상 (Color)
		Material name	Treatment	Manufacturer	Nationality			
1	CASE	NYLON66		KOLON	KOREA	UL 94HB	E88499(S)	BLACK
2	COVER	TIN PLATE		POSCO	KOREA			
3	STEM	PPS		LG CHEMICAL	KOREA	UL 94V0	E67171(M)	BLACK
4	TERMINAL	BRASS	Ag plating	POONG SAN	KOREA			
5	CONTACT	PHOSPHOR BRONZE	Ag clad	POONG SAN	KOREA			
6								
7								
8								
9								
10								
11								
12								
13								
14								

남애전자 ㈜ 연구소