

DATA SHEET

SUNGMUN CODE : STP-1230 SERIES

DESCRIPTION : TACT SWITCH

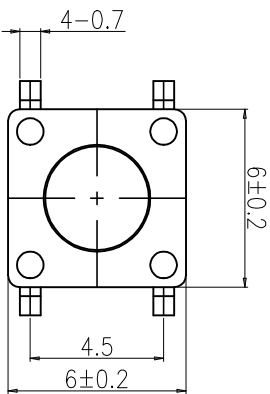
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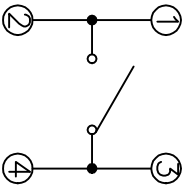


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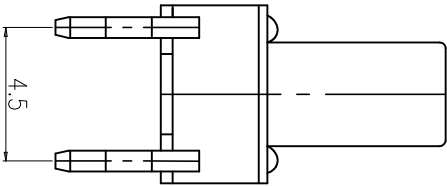
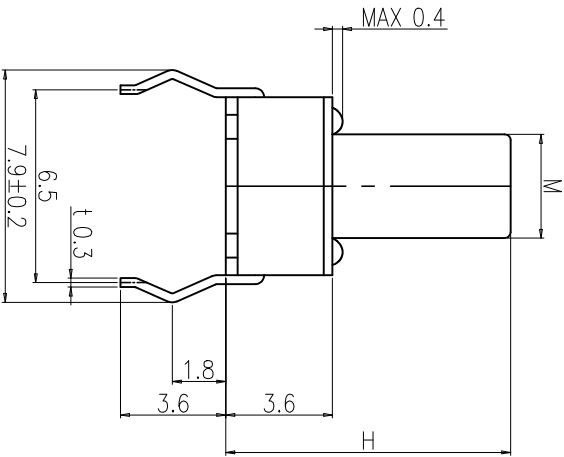
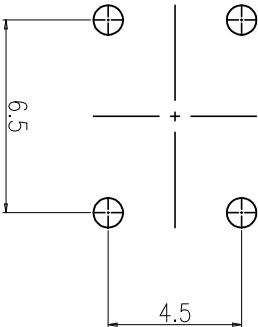
REV. NO.	DATE	REVISION	DR	CH	APP
	25.01.21	Recreation of drawings for unification of drawing formats	W/R KYUNG	K.N KIM	W.J LEE



CIRCUIT DIAGRAM



P.C.B MOUNTING PATTERN



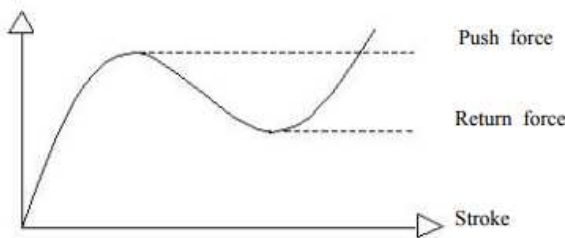
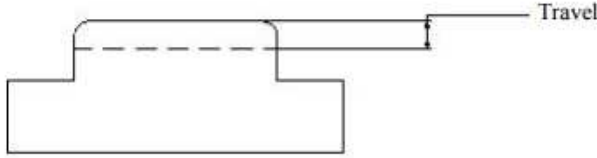
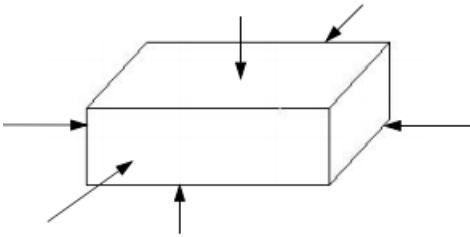
SPECIFICATION

1. RATING : DC 12V 50mA
2. TRAVEL : 0.25±0.1mm
3. CONTACT RESISTANCE : 100mΩ MAX
4. BOUNCE : 10m SEC MAX
5. LIFE CYCLE : 80,000 CYCLE
6. OPERATING FORCE : 160±50gf

Model NO.	STP 1230	STP 1230A	STP 1230B	STP 1230C	STP 1230D	STP 1230F	STP 1230G
H	4.3	5.0	9.5	8.0	13.0	8.5	7.0
M	Ø3.5	Ø3.5	Ø3.5	Ø3.5	Ø3.5	Ø3.2	Ø3.4

DRAW/DESIGNED	CHECKED	APPROVED	UNIT	G.TOL	TITLE
Y.N YEON	S.M PARK	K.I LEE	mm	± 0.2	ROTARY DIP SWITCH
2018-10-23	2018-10-23	2018-10-23	mm	SCALE	MODEL NO.
SUNGUMUN ELECTRONICS CO.,LTD			SIZE	DRAW NO.	REV.
			A4	STP-1230X-S-02	02

2.2 Mechanical characteristics

	Items	TEST CONDITIONS	Criteria
2.2.1	Operating force	Push by recommended operating condition 	See outside drawing.
2.2.2	Travel	Push by recommended operating condition $F = (\text{Operation force}) \times 2$ 	$0.25 \pm 0.1 \text{ mm}$
2.2.3	Stop Strength	A static load of 3kgf shall be applied in the direction of stem operation for a period of 60 seconds.	No damage (Electrical and mechanical)
2.2.4	Stem strength	The maximum force to withstand a pull applied opposite to the direction of stem operation shall be measured.	0.5 kgf min
2.2.5	Vibration test	(1) Amplitude : 1.5mm (2) Sweep rate : 10-55-10Hz for 1 minute. (3) Sweep method : Logarithmic frequency sweep rate. (4) Vibration direction : X.Y.Z (3 directions) (5) Time : Each direction 2 hours (Total 6 hours)	No 2.1 and 2.2.1 to 2.2.2 shall be satisfied.
2.2.6	Impact shock test	(1) Acceleration : 80G (2) Cycle of test : 3 cycles each in 6 directions for a total 18 cycles 	No 2.1 and 2.2.1 to 2.2.2 shall be satisfied.

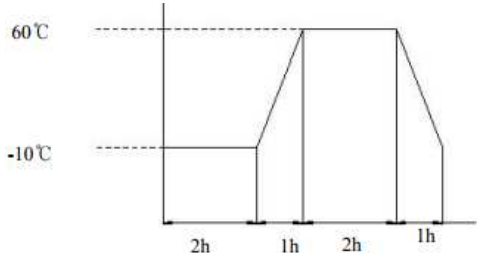
TACT SWITCH SPECIFICATION

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Rev. 01
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2.2.7	Soldering heat test	Soldering area : t/2 of P.W.B thickness (P.W.B : t = 1.6) Soldering temperature : 260±5°C Soldering time : 5±1se	No damage (Electrical and mechanical)
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2.3 Climatic characteristics

	Items	TEST CONDITIONS	Criteria
2.3.1	Cold test	(1) Temperature : -30±2°C (2) Duration of test : 96hours (3) Take off a drop water (4) Standard condition after test : 1 hour	Contact resistance : 200mΩ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.2	Heat test	(1) Temperature : 80±2°C (2) Duration of test : 96hours (3) Standard condition after test : 1 hour	Contact resistance : 200mΩ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.3	Temperature cycle	(1) Test cycles : 5 cycles (2) Standard conditions after test : 1 hour (3) 1 cycle 	Contact resistance : 200mΩ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied
2.3.4	Humidity test	(1) Temperature : 60±2°C (2) Relative humidity : 90~95% (3) Duration of test : 96 hours (4) Take off a drop water (5) Standard conditions after test : 1 hour.	Contact resistance : 200mΩ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied
2.3.5	Operating life test	(1) DC 12V, 5mA resistance load (2) Operation speed : 2~3 cycles/sec (3) Push force : maximum value of operation force (4) Cycle of operation : See outside drawing	Contact resistance :200mΩ max Bounce : 20m sec max Actuating force : ±30% initial force No 2.1.2 to 2.1.3 and 2.2.2 shall be satisfied.

TACT SWITCH SPECIFICATION

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Rev. 01
P : 4 / 4

2.3.6	Salt mist test	Switch shall be checked after following test (1) Temperature : $35\pm 2^{\circ}\text{C}$ (2) Salt solution : $5\pm 1\%$ (3) Durration of test : 48 hours	Without excessive rust or discoloration.
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3. Soldering

3.1 Auto soldering conditions

ITEM	CONDITION
Preheat temperature	110°C max.(Environmental temperature of soldering surface of P.W.B)
Preheat time	60 sec max.
Area of flux	1/2 max. of P.W.B thickness
Temperature of solder	255°C max.
Time of immersion	Within 5sec
Soldering number	Within 2 time (But should bring down heat of the first soldering)
Printed wiring board	Single sided copper-clad laminates.

- 1) After switches were soldered, please be careful not to clean switches with solvent.
- 2) In the case of using soldering iron, soldering conditions shall be 280°C max. and 3 sec max.
- 3) After switches were soldered, please be careful not to load the knobs of switches.

3.2 Manual soldering conditions

Temperature : $350\pm 5^{\circ}\text{C}$

Time : 3 sec max.