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1. GENERAL MATTERS

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

1.2 Operating temperature range : -30 ~ 85℃, 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 1㎃ or by ohmmeter allowing a small current at 1KHz with a load of 150% of the actuating force.	* less than 100mΩ.
3.3	Insulation resistance	DC 100V is applied between terminals and between terminals and earth for 1minute ±5seconds.	* Greater than 100MΩ.
3.4	Dielectric strength	AC 250V (50 ~ 60㎐) is applied between terminals and between terminals and push for 1 minute. Cut off Current : 1~2mA	* 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 10msec.

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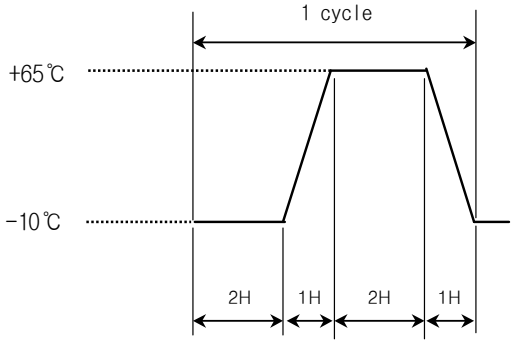
4. MECHANICAL PERFOMANCE

	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.	* greater than 30gf.
4.3	Stop strength	A static force of 3Kgf shall be applied to the direction of operation for 60 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		* 0.2±0.1mm
4.6	Solder heat resistance	Switch shall be checked after following test. (Reflow soldering) (1) Peak temperature : 260℃ (2) Peak time : 10sec	* The requirement in item 3 and 4 shall be satisfied.
4.7	Solderability	Switch shall be checked after following test. (Dip soldering) (1) Temperature : 260±5℃ (2) Time : 10sec	* 95% or more of immersion area shall be covered with new solder

5. DURABILITY

	PROPERTY	TEST CONDITIONS	PERFORMANCE
5.1	Operating life	The test in conducted according to the below. (1) DC5V 5mA resistive load (2) Rate of operation : 120 cycle/min (3) Actuating force : 150% of actuating force (4) Operating cycle : As per individual manufactured drawing.	* Contact resistance : 1Ω max. * Insulation resistance : 10MΩ min. * Actuating force : within ± 30% of the initial value.

6. WEATHER PROOF

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.1	Cold heat proof	After testing at -30℃±2℃ 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℃±2℃ 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.	
6.3	Damp heat proof	After testing 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 min.. * The others, The requirement in item 3 and 4 shall be satisfied.
6.4	Thermal cycling	 After the test conducted under 5 cycles the sample is allowed to stand under normal temperature and humidity conditions for 1 hour, and the measurement is performed within 1 hour.	* The requirement in item 3 and 4 shall be satisfied.

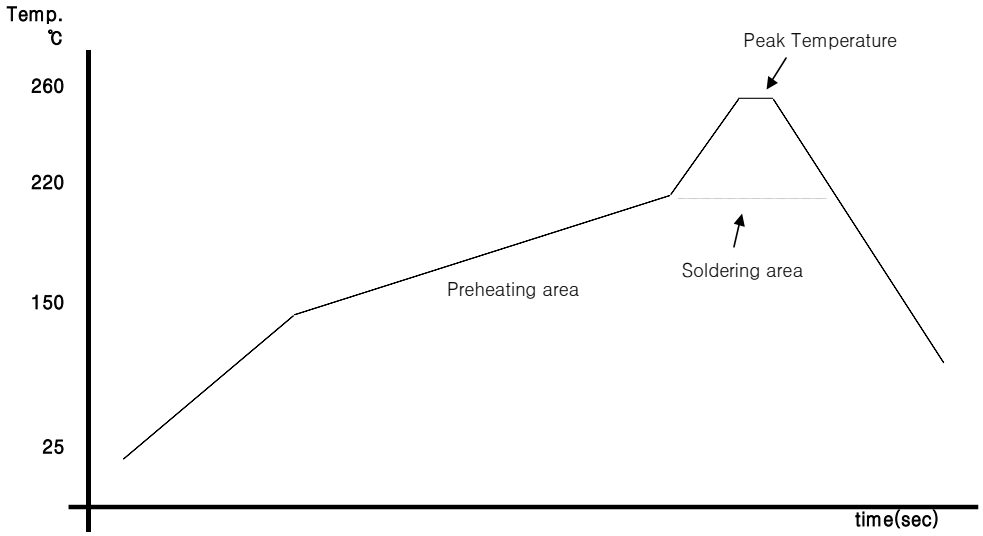
7. SOLDERING CONDITIONS

7.1 Reflow soldering condition

1) Preheat ---------- 150℃ ~ 200℃, 120 ±20 (sec)

2) Peak temperature --- 260℃ max. 10 (sec)

3) Soldering area temperature ------ 217℃, 90 ~ 120 (sec)



< Temperature profile >

7.2 Manual soldering

1) Soldering temperature --------- 350℃±5℃

2) Soldering time ---------- 3(sec)