PRODUCT SPECIFICATION

Part Number	TM-1201-X			Rev	E	Date	10/12/18
Product Description	Detection Switch , W4.2xD3.55，SMT,Side operation					Page	1
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1 Operating Temperature Range

-20 to+70℃(normal humidity, normal press.)

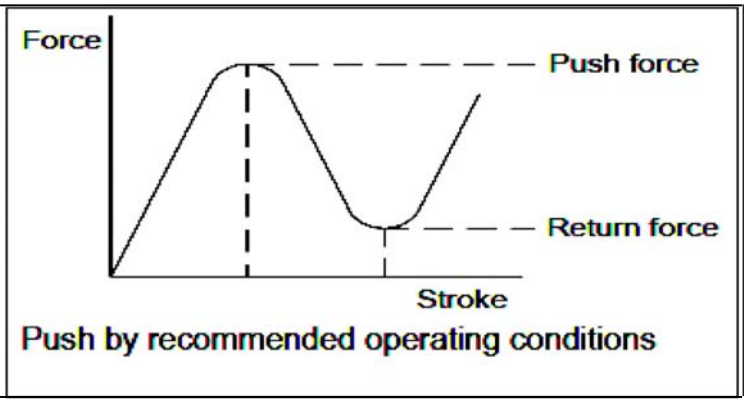
2 Storage Temperature Range

-40 to+85℃(normal humidity, normal press.)

3 Electrical Characteristics

3.1	Contact Resistance	100mΩ Max.	Applying a static load of 2 times operating force to the center of the stem, measurements shall be made by 5V DC 10mA or more than 1KHZ AC small-current contact resistance meter.	
3.2	Resistance Insulation	100MΩ Min.	Measurement shall be made following application of 100V DC potential, across terminals, and across terminals and cover, for one minute.	
3.3	Withstand Voltage	250V.AC/50Hz for 1 min，	Between terminals	No arcing or break down shall occur. Trip current＜0.5mA.
			Between individual terminal and frame	

4 Mechanical Characteristics

4.1	OPERATING FORCE	30 ±10gf	

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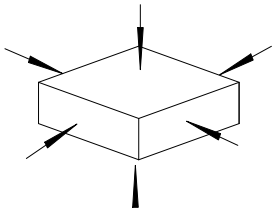
4.2	Operation Position	2.5 ±0.05mm	Placing the switch such that the direction of switch operation is vertical and then applying static load of 2times operating force to the center of the stem; the travel distance for the switch to come to a stop shall be measured.
4.3	Terminal Strength	Shall be free from terminallooseness,damageandinsulator breakage.Nofunctional defective occur	A static load of 2N shall be applied to the tip of terminal in a desired direction for 10 ± 1s. The test shall be done once per terminal.
4.4	Vibration Proof	After test, Contact resistance:200 mΩMax. I No functional defective occur No abnormalities shall be recognized in appearance and construction.	mounting device and method. Switch shall be measured after following test. (1) Vibration frequency range 10~55 Hz (2) Total amplitude 1.5mm (3) Sweep ratio: 10~55~10Hz Approx. 1 min (4) Method of changing the sweep vibration frequency: logarithmic or linear (5) Direction of vibration: Three perpendicular directions including actuating direction. (6) Duration: 2 hours (6 hours in total)
4.5	Mechanical Shock	After test, Contactresistance:200mΩMax. No functional defective occur Shall be free from mechanical abnormalities.	Switch shall be measured after following test: (1) Mounting Method: Normal (2) Acceleration: 490m/s2 (50G) (3) Duration: 11ms (4) Test Direction: 6 directions 

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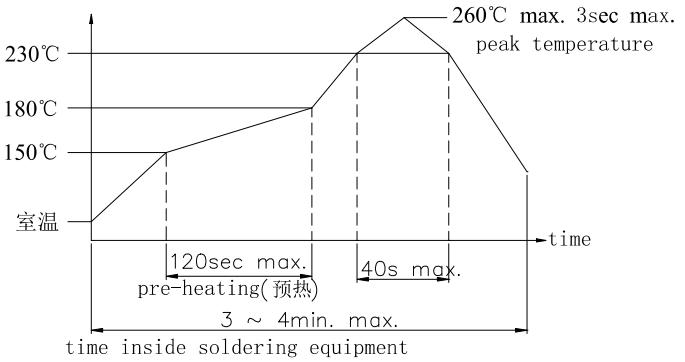
5.Durability

5.1	SOLDERING TEST	Over 90% of the immersed surface was covered by tin	The tip of the terminal shall be dipped 0.5mm in the solder bath within temperature of 230±5℃ for 3s. 0.5
5.2	REFLOW TEST	Without deformation of case or excessive looseness of electrical properties	
5.3	Operating Life	(1) CONTACT RESISTANCE SHALL BE 250mΩ MAX. (2) MECHANICAL AND ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED.	1. ENDURANCE WITHOUT LOADING: A SWITCH SHALL BE SUBJECTED TO100, 000 CYCLES AT A SPEED OF 40-50 CYCLES FOR 1MIN. 2. ENDURANCE WITH LOADING: A SWITCH SHALL BE SUBJECTED TO 100, 000 CYCLES AT A SPEED OF 40-50 CYCLES FOR 1MIN.
5.4	SAIL SPRAY	（1）Contact resistance200mΩ. （2）insulation resistance 100 min.	1）Temperature：35±2℃ 2）Cycle：8 Hours testing(3Times) and 1 Hours stop. Based on total 36 hours. 3)Salt solution concentration: 5±1% by weight.1）

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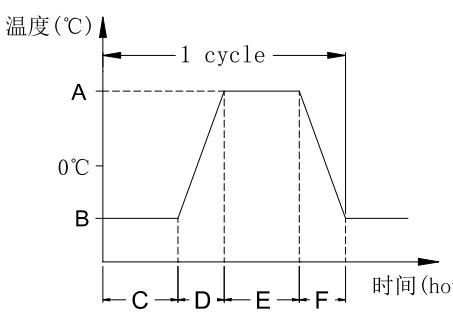
5.5	Heat Resistance	Contact resistance: 200 mΩ Max. Insulation resistance :50	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made:
5.6	Low Temperatur e Resistance	Contact resistance: 200 mΩ Max. Insulation resistance :50 MΩ Min.	(1)Temperature: 85±2℃ (2) Time: 96 hours Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made: (1)Temperature: -40±2℃ (2) Time: 96 hours Water drops shall be removed.
5.7	Moisture Resistance	Contact resistance: 200 mΩ Max. Insulation resistance :50 MΩ Min.	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made: (1) Temperature: 60±2℃ (2) Relative humidity: 90 to 95% (3) Time: 96 hours Water drops shall be removed.
5.8	Change of Temperature	Contact resistance: 200 mΩ Max. Insulation resistance :50 MΩ Min.	Following ten cycles of high temperature test .The Sample shall be Placed in Normal temperature and humidity Conditions for one hour before measurements are made. During this test, water drops shall be removed.  A：+85±2℃ B：-40±2℃ C：2 (hour) D：1 (hour) E：2 (hour) F：1 (hour) Cycling：Five cycles

6. Other precautions

(1) Following the soldering process, do not try to clean the switch with a solvent or the like.

(2) Safeguard the switch assembly against flux penetration from its topside.

(3) Please have the products keep in close status and the storage time is 90 days guaranty after delivering the goods at most.