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1. Application 適用範圍：

1.1. Power switch applied on computer, electronic instruments and various home appliances.

使用在電腦，電子儀器及各式家用電器之電源開關。

1.2. Application temperature range：0℃ to 85℃

使用溫度範圍宜在 0℃ to 85℃ 之間。

2. Test standards 測試依據：

2.1. Pre load test：Point No.5 is pre-load test specially designed for customer, served as complimentary to switch' s capability.

負載前測試：第 5 點測試為特別為客戶安排之負載前測試，以補充此開關之電氣等級。

2.2. UL FILE NO.1054：according to the electrical level specified and acquired in Point No.3. The same switch is tested in the Test Condition Point No.4, undergoing the sequential tests of Point No.6, 7&8 without failure.

依據 UL FILE NO. 1054 規範，此開關以第 3 條陳述及所取得之電氣等級測之，意即在第 4 條的測試環境下，同一開關皆須依順序通過第 6, 7&8 條之測試。

2.3. Mechanical tests：the switch shall pass the tests specified in Point No. 9,10,11&12 with no electrical load, separately. But not the same switch is tested in each test.

機械測試：開關必須通過第 9,10,11 及 12 條之無電氣負載機械測試，但同一開關不得重覆測試。

2.4. Cooling , heating , humidity tests：as specified in Point No. 13,14&15

耐寒，耐熱，耐濕測試：如第 13,14 及 15 條說明之。

3. Rating & acquired safety regulations 額定安規電氣等級：

3.1. 3A 125VAC

4. Test condition：The switch is tested at a temperature range of 10 - 40℃ (UL), relative humidity range of 45-85%, and atmosphere 860~1060mbar.

測試條件：此開關依據 UL 測試規範於 10-40℃ 之溫度範圍內測之；相對濕度 45-85%；大氣壓力 860~1060 毫巴間。

5. Pre-load test electrical performance 過負載測試前之電氣性能：

5.1. Contact resistance：Measure by micro-ohm meter at DC. 2-4V 5A should be less than 10 mΩ initial
接觸阻抗：以微歐姆計之 DC. 2-4V 5A 測之，接觸阻抗應小於 10mΩ

5.2. Insulation resistance：Measure with DC. 500V applied between terminals of open contacts and between terminals of opposite polarity. Should be more than 1,000MΩ.

絕緣阻抗：施以 DC. 500V 於開路之端子間，及不同迴路之端子間，必須超過 1,000MΩ。

5.3. Dielectric Voltage withstand test : A switch shall withstand for 1 minute without breakdown or arc in a potential applied between terminals of open contacts and between terminals of opposite polarity, and between terminals and frame as following:

耐電壓測試：開關須施以一分鐘電壓於開路之端子與端子間，不同兩極之端子間及外殼與端子間，以下列額定電壓測之，一分鐘內不得有電弧導通或火化發生。

5.3.1. 1500 Volts for a switch rated more than 250VAC

額定 250VAC 以 1500 伏特測之。

5.3.2. 1000 volts for a switch rated more than 125VAC.

額定 125VAC 以 1000 伏特測之。

5.4. Operational force : The switch should be cable of being operated within a force of 400gram±100gram.

操作力：開關應該能夠在 400 公克±100 公克範圍內動作。

6. Load test : The same switch shall be operated according to following table, passing the overload tests first, then undergoing endurance test. During the testing, there should not be any contacts sticking, breakage & failure to the switch.

負載測試：開關必須通過以下表格內之測試，必先通過過負載測試，既而通過壽命測試；測試中開關接點不得黏著，破裂，不導電，卡死等不良現象發生。

Test 測試	Voltage 伏特	Current 安培	Power factor 功率因素	Frequency 頻率 次/分	Times 測試總數	By
Overload test 過負載測試	125V	4.5A	0.75-0.8	6-10 cycles/min.	50	UL
Endurance test 壽命測試	125V	3A	0.75-0.8	6-10 cycles/min.	6000	UL

7. Temperature test : The test should be taken after load test with its rated current and voltage, and measured by the following standards.

溫升測試：負載測試後進行此項測試，依下列標準實行。

7.1. The temperature rise after the load test shall not be more than 30°C. (UL)

依據 UL 測試規定，於負載測試後，溫升不得超過攝氏 30°C。

8. Dielectric Voltage withstand test : A switch after passing the test specified above shall withstand for 1 minute without breakdown or arc in a potential applied between terminals of open contacts and between terminals of opposite polarity, and between terminals and frame as following:

耐電壓測試：開關在經過第 7 條測試後，須施以一分鐘電壓於開路之端子與端子間，不同兩極之端子間及外殼與端子間，以下列額定電壓測之，一分鐘內不得有電弧導通或火化發生。

8.1. 1500 volts for a switch rated more than 250VAC

額定 250VAC 以 1500 伏特測之。

8.2. 1000 volts for a switch rated more than 125VAC.

額定 125VAC 以 1000 伏特測之。

9. Pull test : A static force of 5 pound (2.27kg) being applied in one direction on the tip of the terminal for 1 minute. The terminal may be deformed, but shall not sustain any trouble as deviation and breaking of terminal and breaking of insulation material.

拉力測試：施拉以同一方向之 5 磅靜力(2.27 公斤)於端子前端一分鐘，端子可容許變型，但不能有脫離，斷裂及開關本體之絕緣部位破壞現象。

10. Soldering test 焊錫試驗：

10.1. S.M.T. dipping : The temperature of soldering should be $250\pm 5^{\circ}\text{C}$ within 3 ± 0.5 seconds of dipping duration, and more than 75% of the terminal shall be covered by solder. After the soldering, the switch shall not have any deformations or fail to function.

過錫鑪溫度標準：錫鑪溫度必須 $250\pm 5^{\circ}\text{C}$ 之間，過錫鑪時間不得超過 3 ± 0.5 秒；過錫後，端子表面必須有百分之七十五吃錫程度，且不可有變形或不良。

10.2. Handwork soldering : The temperature of soldering should be $350\pm 5^{\circ}\text{C}$ when applied with a 60W iron head, and should abide by the following rules:

手工焊錫：以六十瓦的鉻鐵頭焊接時，溫度必須控制在 $350\pm 5^{\circ}\text{C}$ ，焊接時必須符合：

10.2.1. The soldering iron shall not be pressed to terminal when soldering, but only slightly touch the surface of the terminal.

鉻鐵頭不得施加壓力於端子，僅輕觸及端子表面。

10.2.2. Soldering time should be controlled within 3 seconds

焊接時間必須控制在三秒內。

10.2.3. After the soldering, the switch shall not have any deformations or fail to function.

焊錫後，端子表面必須有百分之七十五吃錫程度，且不可有變形或不良。

11. Mechanical life test : the switch applied without electric load, should operate at least 50,000 times, without mechanical failure.

無負載機械壽命測試：未施以電氣負載情況下，開關動作次數至少能超過五萬次。

12. Strength of the operational part : The test is no considerable loosening, break, and mechanical strange phenomena happened. The following conditions for testing:

操作部強度：這測試是不能有顯著的鬆動，斷裂及機械異常現象發生。下列條件測試之：

12.1. A static load of 2.5kgf is applied to the actuating direction lasting for 15 sec.

沿操作部之動作方向加靜負荷 2.5kgf 15 秒

12.2. A static load of 2.5kgf is applied to the front end with a right angle of actuating force lasting for 15 sec.

沿操作部前端和動作方向成直角處加靜負荷 2.5kgs 15 秒

13. Cooling endurance test : Put the switch at $-30\pm 2^{\circ}\text{C}$ for 48 hours and then take it out one hour measuring it at normal temperature and humidity surrounding within one hour after clean off water vapor. The following are tested.

耐寒性測試：將開關置入 $-30\pm 2^{\circ}\text{C}$ 環境中達 48 小時後，取出一個小時後，置於室溫中，在水氣揮發後一小時內測之以下標準。

13.1. Contact resistance : Lower $10\text{m}\Omega$.

接觸電阻：須小於 $10\text{ m}\Omega$ 。

13.2. Insulation resistance : Over $1000\text{ M}\Omega$.

絕緣阻抗需大於 $1000\text{ M}\Omega$ 。

13.3. Dielectric voltages withstand : The same as Point No. 8.

耐電壓：依第 8 條規定測試之。

14. Heating endurance test : Put the switch at $85\pm 2^\circ\text{C}$ for 48 hours and then take it out one hour, measuring it at normal temperature and humidity surrounding within one hour after clean off water vapor. The following are tested.

耐熱性測試：將開關置入 $85\pm 2^\circ\text{C}$ 環境中達 48 小時後，取出一個小時後，置於室溫中，在水氣揮發後之一小時內測之以下列標準。

14.1. Contact resistance : Lower $10\text{m}\Omega$.

接觸電阻：須小於 $10\text{ m}\Omega$ 。

14.2. Insulation resistance : Over $1000\text{ M}\Omega$.

絕緣阻抗需大於 $1000\text{ M}\Omega$ 。

14.3. Dielectric voltages withstand : The same as Point No. 8.

耐電壓：依第 8 條規定測試之。

15. Humidity endurance test : Put the switch at $40\pm 2^\circ\text{C}$ relative humidity 90 to 95% for 48 hours and then take it out one hour, measuring it at normal temperature and humidity surrounding within one hour after clean off water vapor. The following are tested.

耐濕性測試：將開關置入 $40\pm 2^\circ\text{C}$ 相對溼度 90~95% 環境中達 48 小時後，取出一個小時後，置於室溫中，在水氣揮發後之一個小時內測之以下標準。

15.1. Contact resistance : Lower $10\text{m}\Omega$.

接觸電阻：須小於 $10\text{ m}\Omega$ 。

15.2. Insulation resistance : Over $1000\text{ M}\Omega$.

絕緣阻抗需大於 $1000\text{ M}\Omega$ 。

15.3. Dielectric voltages withstand : The same as Point No. 8.

耐電壓：依第 8 條規定測試之。