


# 豐實衛奇電子科技有限公司

## F-SWITCH ELECTRONICS CO.,LTD.




送承認日期序號	FS391221121-0142		
承認書編號	FS-WI-SP-1153	發行日期	20221121
版次	A/0	總頁數	11

# 產品承認書

## Specification for Approval

客戶名稱 Customer		客戶代碼	FC391
客戶部件料號 Customer Part No.		外形圖 Shape chart	
產品型號 Product Model	<b>Encoder (SMT 型)</b>		
F-SWITCH 料號 Company Part No.	<b>E5E8-3.5S5-12W15-F200</b>		
產品規格 Prduct SPEC.	SMT 平貼型, 5×4mm 帶開關編碼器, 安裝高度 3.5mm, 四方孔徑 0.8mm, 扭力 6gf MAX, 按力 200g, 12 脈沖 0 定位, 無齒感, 壽命 10 萬次.		

客戶確認 Customer confirmation	
採購 Purchase	
品管 Quality	
工程 Engineer	
客戶簽署 (蓋章) Sign for Customer Approved 確認日期: _____	

公司確認 Company confirmation	
製作 Prepared by	
工程 Engineer	
批准 Approved by	
<b>F-SWITCH</b> 公司簽署 (蓋章) Sign for Company Approved 確認日期: _____	

Index: P1: Specification drawing; P2-P10: Specification; P11: Paking drawing
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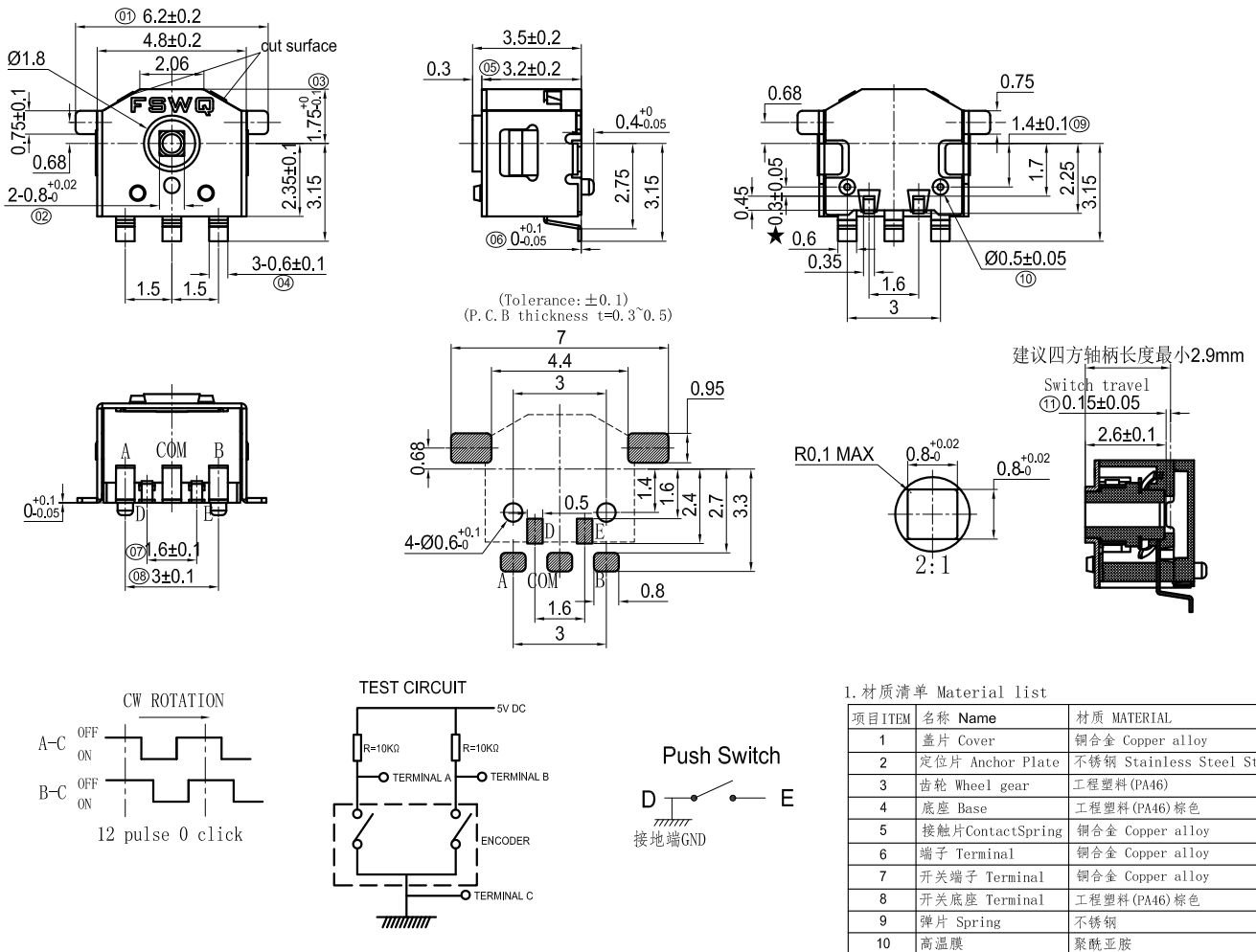
聯繫電話: 13902661069



# F-SWITCH ELECTRONICS CO.,LTD.

名称 TITLE	ENCODER	料号 PART NO.	E5E8-3.5S5-12W15-F200	图号 DRAWING NO.	FSE5-WI-DR-018
规格 SPEC	SMT平贴型, 5×4mm带开关编码器, 安装高度3.5mm, 四方孔径0.8mm, 扭力6gf MAX, 按力200g, 12脉冲0定位, 无齿感, 寿命10万次.				

No.	Items	Standard	No.	Items	Standard
1(1.2)	Operating Temperature Range	-25°C to +75°C	18(6.1)	Solder Ability	245°C Max, 3S Max
2(1.3)	Operating Relative Humidity	≤75% RH	19(7.1)	Mechanical Life(Encoder)	100,000 cycles(30 t/min, Torque attenuation <30%)
3(3)	Ratings	DC 5V 0.5mA (Max 1mA, Min 0.1mA)	20(7.2)	Mechanical Life(Switch)	100,000 cycles(180 t/min, Torque attenuation <30%)
4(4.1)	Contact Resistance	200mΩ Max(Initial status).	21(8.1)	Cold Proof	-25±2°C 96h
5(4.2)	Insulation Resistance	50MΩ Min(Initial status).	22(8.2)	Hot Proof	75±2°C 96h
6(4.3)	Dielectric Voltage	AC50V · 60s	23(8.3)	Moisture Resistance	40±2°C · 90-95%RH 96h
7(4.4)	Output signal format	C.W. 12pulse/360°, A(A~C), B(B~C)	24(8.4)	Temperature Cycling	-25~75°C · change 5 cycles
(5.2)		C.C.W. 12pulse/360°, B(B~C), A(A~C)	25(8.5)	Salt Mist	5% NaCl 24h(Cut surface exemption)
8(4.4)	Phase-different	T1, T2, T3, T4 ≥ 4mS	26(8.6)	Vulcanization test	2% Na2s 2 minutes(Cut surface exemption)
9(4.5)	Chattering	t1, t3 ≤ 3mS	Dimensions:		
10(4.5)	Bounce	t2 ≤ 2mS	1	6.2±0.2	
11(5.1)	Detent points	0detent points, each angle: 30°±3°	2	0.8 <sup>+0.02</sup> <sub>-0.1</sub>	
12(5.3)	Rotational force	6gf.cm MAX (Initial status)	3	1.75 <sup>0</sup> <sub>-0.1</sub>	
12(5.4)	Push switch force	200±50gf.cm (Initial status)	4	3-0.6±0.1	
12(5.5)	Push switch travel	0.15±0.05mm	5	3.2±0.2	
13(5.6)	Tooth Intensity Value	/	6	0 <sup>+0.1</sup> <sub>-0.05</sub>	
14(5.6)	Tooth sense consistency	/	7	1.6±0.1	
15(5.7)	Axial Swing Strength	3N, 60S	8	3.0±0.1	
16(5.8)	Terminal Strength	3N, 10S.	9	1.4±0.1	
17(6.2)	Solder Heat Resistance	SMT Soldering 245°C Max 3S Max, 230°C Min 30S Max	10	Ø0.5±0.05	
	Manual Soldering	350°C Max, 3S Max	11	0.15±0.05	



VER.	内容 S.U.B.	修改 MODIFY	日期 DATE	公差 TOLERANCE	单位 UNIT	张数 SHEET	图幅 SIZE	图类 TYPE
①				L<5	±0.2	mm	A4	成品图
②				L<10	±0.3	版本 REV.	设计 CHKD.	核准 APPD.
③				L<30	±0.5	A0	DCC 2022.11.21	黄炎 2022.11.21
④				.X° ±2° 角法 P R O J.5	X.° ±5°	比例 SCALE	王宝莲 2022.11.21	陈列 2022.11.21
	A	B	C	D	E	F	G	H



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	產品編碼 PART NO.	E5E8-3.5S5-12W15-F200		

### 1. General Characteristics 一般特性:

1.1 Application: This specification is applied to rotary encoder used for general.

適用範圍：該承認書適用於通用旋轉編碼器。

1.2 Operating Temperature Range: -25°C to +75°C

使用溫度範圍：-25°C to +75°C

1.3 Operating Relative Humidity: ≤75% RH

使用相對濕度：≤75%RH

1.4 Test Conditions: Unless otherwise specified, the atmospheric conditions for making measurements and tests are as follows:

試驗條件：除非另有規定，進行測量和試驗的大氣條件如下：

Environment Temperature: 5~35°C

环境温度：5~35°C

Relative Humidity: 45~75%

相对湿度：45~75%

Atmospheric Pressure: 86~106Kpa (860~1060mbar)

大气压力：86~106Kpa (860~1060mbar)

### 2. Appearance, Structure and Dimensions 外觀，結構和尺寸:

2.1 Appearance: The encoder shall have good finishing, and no rust, crack or plating defects.

外觀：產品外觀良好，無銹蝕、裂紋和鍍層缺陷。

2.2 Structure & Dimensions: See Product Specifications.

結構及尺寸：參見產品規格圖。

2.3 Markings: See Product Specifications.

標識：參見產品規格圖。

### 3. Ratings 額定負荷：5VDC (Max 1mA, Min 0.1mA)。

### 4. Electrical Characteristics 電氣特性:

No.	Item 項目	Criteria 標準	Test Method 實驗方法
4.1	Contact Resistance 接觸電阻	200mΩ Max. (初始值 initial value)	Using the micro resistance tester with error less than 5% for testing. 使用誤差小於 5% 的微電阻測試儀進行測試。
4.2	Insulation Resistance 絕緣電阻	50MΩ Min. (初始值 initial value)	Using the insulation resistance tester. setting parameters to DC50V, The insulation resistance between the terminal and the cover, the terminal and the terminal is test. 使用絕緣電阻測試儀，設置參數為 DC50V，測試端子與外殼，端子與端子之間的絕緣阻抗。
4.3	Dielectric Voltage 抗電強度	AC50V test 60s, No dielectric breakdown shall occur. AC50V 測試 60s 無擊穿現象發生。	Using the voltage resistance tester, set the parameters to the AC50V, test the voltage resistance between the terminal and cover or terminal and terminal, time is 60s. 使用耐電壓測試儀，設置參數為 AC50V，測試端子和外殼或端子與端子之間的耐電壓，時間 60s。



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No.	Item 項目	Tandard 标准	Test Method 测试方法	
4.4	Output signal format 輸出信號	T1, T2, T3, T4 ≥ 4ms	The encoder rotates 360 degrees per second, 2 Phase-different signals (signalA, signalB) Derails shown in (The broken line shows detent position.) 編碼器每秒鐘轉動 360 度, A、B 兩信號輸出相位差, 輸出波形詳細見圖, 卡點位置如下圖所示(虛線表示帶卡點裝置的上擎子處位置)	
		Shaft rotational direction 軸回轉方向	Signal (Between terminals) 信號(端子之間)	<p>Output 輸出波形</p>
		C. W.	A (A~C)	
			B (B~C)	
C. C. W.	A (A~C)			
	B (B~C)			
4.5	Switching characteristics 切換特性	Chattering 振動 Fig. 1 t1, t3 < 3ms	<p>The encoder is connected to the circuit in Figure 1. The encoder rotates 360 degrees per second. When the circuit is switched from ON to OFF, At 2.5 v voltage, test circuit generates vibration time, when every times.</p> <p>將編碼器按圖 1 的電路接在示波器上, 編碼器每秒鐘轉動 360 度, 當電路從 ON 到 OFF 的瞬間, 每次轉換, 在電壓 2.5V 時, 測試電路產生振動的時間。</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Fig 1</p> </div> <div style="text-align: center;"> <p>Fig: 2</p> </div> </div>	
		Sliding noise (Bounce) 跳动 Fig. 2 t2 < 2ms	<p>The encoder is connected to the circuit in Figure 1. The encoder rotates 360 degrees per second, when the circuit in the ON region, test circuit generation time of jitter. Beating position acquisition should be in the ON region of voltage at 2.5V voltage position. In the ON region, In the ON region, voltage at 2.5V phenomenon occurs more than 2 times, it is considered to be continuous beating.</p> <p>將編碼器按圖 1 的電路接在示波器上, 編碼器每秒钟转动 360 度, 当电路在 ON 区域时, 测试电路产生跳动的時間. 跳动位置的获取应在 ON 区域, 电压在 2.5V 的位置。</p> <p>在 ON 区域, 电压在 2.5V 的现象出现 2 次以上的, 被认为是连续跳动。</p>	



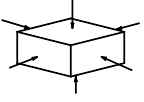
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5. Mechanical Characteristics 機械特性

No.	Item 項目	tandard 标准	Test Method 测试方法
5.1	Detent points 执子点数与位置	0 detent points each detent angle:30° ±5° 0 点执子 每点角度: 30° ±5°	
5.2	Output waves 输出波形数	12 pulse/360° 12 脉波/360°	Oscilloscope test available. 可使用示波器测试。
5.3	Rotational force 旋转力矩	See the Drawing. 参见规格图	Use of torsion gauges , The test head is inserted into the rotating shaft , rotates according to the rotation direction of the shaft, and the experiment is carried out with the uniform rotation force, Read maximum. 使用扭力計，把測試頭插入轉軸中，沿軸的轉動方向，使用均勻的旋轉力進行測試，讀取最大值。
5.4	Operating Force 操作力(带开关功能适用)	Reference spec drawing sheet 参见图纸	Apply a tension load on the midpoint of the actuator (or 1mm to the tip of the shaft) to supply a pressure vertically from its free position to operating position. 在操作元件中间(或在离操作元件末端1mm处)沿操作方向均匀施加静载荷，使操作元件转换到动作位置。
5.5	Releasing Force 回复力(带开关功能适用)	Reference spec drawing sheet 参见图纸	The value to which the force in the actuator midpoint (or 1mm to the tip of the shaft) must be reduced to allow the contact to the normal position. 在操作元件末端沿操作方向均匀减少静载荷，使操作元件从动作位置转换到自由位置。
5.6	Terminal Strength 端子强度	Shall be free from terminal looseness, and insulator breakage. The electrical performance requirements specified shall be satisfied. 端子無鬆動，及絕緣層破裂。電氣性能應符合第4項要求。	A static load of 3N shall be applied to the tip of terminals for 10s in any direction. 任意方向施加 3N 作用力於接線端末端，持續時間 10s.



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No.	Item 項目	tandard 標準	Test Method 測試方法
5.7	Vibration Proof 振動	<p>After test, Contact resistance:5Ω Max. Insulation resistance:10MΩ Min. The electrical performance requirements specified shall be satisfied. No abnormalities shall be recognized in appearance and construction.</p> <p>實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 電氣性能應符合要求。 表面及結構無明顯變形。</p>	<p>Encoder shall be secured to a testing machine by a normal mounting device and method. Encoder shall be tested according to the following request::</p> <ol style="list-style-type: none"> <li>(1) Vibration frequency range = 10~55 Hz</li> <li>(2) Total amplitude =1.5mm</li> <li>(3) Sweep ratio: 10~55~10Hz Approx. 1 min</li> <li>(4) Method of changing the sweep vibration frequency: linear</li> <li>(5) Direction of vibration: Three perpendicular directions including actuating direction.</li> <li>(6) Duration: 2 hours (6 hours in total)</li> </ol> <p>編碼器採用常規的安裝方法牢固地安裝在試驗設備上，並在下述參數條件下進行試驗：</p> <ol style="list-style-type: none"> <li>(1) 振頻=10-55Hz</li> <li>(2) 振幅 1.5mm</li> <li>(3) 振動變化速率：10-55-10Hz 大約 1 分鐘</li> <li>(4) 變頻方法：線性型式</li> <li>(5) 振動方向：三個相互垂直的方向，其中一個方向應是促動元件運動的方向。</li> <li>(6) 時間：每個方向 2 小時（共 6 小時）。</li> </ol>
5.8	Mechanical Shock 耐衝擊	<p>After test, Contact resistance: 5Ω Max. Insulation resistance:10MΩ Min. The Electrical performance requirements specified shall be satisfied. Shall be free from mechanical abnormalities.</p> <p>實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 電氣性能應符合要求。 表面無變形且操作無異常。</p>	<p>Encoder shall be tested according to the following request:</p> <ol style="list-style-type: none"> <li>(1) Mounting Method: Normal</li> <li>(2) Acceleration: 490m/s<sup>2</sup> (50G)</li> <li>(3) Duration: 11ms</li> <li>(4) Test Direction: 6 directions</li> </ol>  <p>(5) Number of shocks: 3 times per direction (18 times in total)</p> <p>編碼器在下述參數條件下進行試驗：</p> <ol style="list-style-type: none"> <li>(1) 安裝方法：常規方法</li> <li>(2) 加速度：490m/ s<sup>2</sup> (50G)</li> <li>(3) 時間：11ms</li> <li>(4) 實驗方向：圖示 6 方向</li> <li>(5) 衝擊次數：每個方向 3 次（總共 18 次）</li> </ol>



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## 6. Soldering Characteristics 焊接性能

No.	Item 項目	tandard 標準	Test Method 測試方法
6.1	Solder Ability 可焊性	Melting surface area should exceed 95% of the total 熔錫面面積應該超過 95%	<p>The crucible is tested under the following parameters :</p> <p>(1) solder: tin paste containing 3% silver.                      (2) Welding temperature :245°Cmin.;                      (3) Welding time :3 s min.</p> <p>編碼器在下述參數條件下進行試驗：</p> <p>(1) 焊料：含銀 3%的錫膏。                      (2) 焊接溫度：245°C Min。                      (3) 熔焊時間：3s Min.</p>
6.2	Solder Heat Resistance 耐焊接熱	<p>After test,                      No abnormalities shall be observed in appearance and operation. Torque decay 30% Max.                      Contact resistance: 5Ω Max.                      Insulation resistance:10MΩ Min.</p> <p>The Electrical performance requirements specified shall be satisfied.</p> <p>實驗後：                      無外觀、熔膠變形不良，扭力衰變 30% Max。                      接觸電阻：5Ω Max。                      絕緣電阻：10MΩ Min。                      電氣性能應符合第 4 項要求。</p>	<p>The filter is tested under the following parameters:</p> <p>(1) Mode of welding: SMT                      (2) Welding temperature and time:                      Welding :250°C above 3-5 S: 230°C above 30-40 S:                      (3) Manual welding :°CMax 3s Max 350</p> <p>編碼器在下述參數條件下進行試驗：</p> <p>(1) 焊接方式：SMT                      (2) 焊接溫度及時間：                      自動焊接：250°C以上 3-5S: 230°C以上 30-40S:                      (3) 手工焊接：350°C Max 3s Max</p>



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7. Durability characteristics 耐久性能

No.	Item 項目	tandard 標準	Test Method 測試方法
7.1	Mechanical Life 機械壽命	<p>After test Contact resistance: 5Ω Max. Insulation resistance: 10MΩ Min. The decay of the operating force should be within ±30%. The electrical performance requirements specified in item 5.1、5.3 shall be satisfied. 實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 操作力衰變應在±30%以內。 機械性能應符合第 5.1、5.3 條的要求。</p>	<p>Under the condition of no load, the speed is 30 times per minute, and the life test equipment is continuously converted on the life test equipment. the working mode of the life test equipment is to rotate 360 degrees counterclockwise immediately after rotating 360 degrees clockwise for the test once. The cycle of transformations is shown in the drawing. 在不帶負荷的條件下，速度為 30 次/分鐘，在壽命試驗設備上連續轉換，壽命試驗設備工作方式是順時針方向旋轉 360 度後立即逆時針方向旋轉 360 度為試驗 1 次。轉換次數參見圖紙。</p>
7.2	Electronics Life 電氣壽命	<p>After the experiment: Contact resistance :5ΩMax. Electrical resistance :10 MΩMin. The telecommunication performance shall meet the requirements of Sections 4.4 and 4.5 實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 電訊性能應符合第 4.4、4.5 條的要求。</p>	<p>Under the condition of the 0.1 mA 5VDC load, the speed is 30 times / min, and the life test equipment is continuously converted on the life test equipment. The working mode of the life test equipment is to rotate 360 degrees counterclockwise immediately after the clockwise rotation 360 degrees for the test once. The cycle of transformations is shown in the drawing. 在帶 0.1mA 5VDC 負荷的條件下，速度為 30 次/分，在壽命試驗設備上連續轉換，壽命試驗設備工作方式是順時針方向旋轉 360 度後立即逆時針方向旋轉 360 度為試驗 1 次。轉換次數參見圖紙。</p>
7.3	Switch Life 开关寿命(带开关功能适用)	<p>After test Contact resistance: 10Ω Max. Insulation resistance: 10MΩ Min. The decay of the operating force should be within ±30%. The electrical performance requirements specified in item 5.1、5.3 shall be satisfied. 實驗後： 接觸電阻：10Ω Max. 絕緣電阻：10MΩ Min. 操作力衰變應在±30%以內。 機械性能應符合第 5.1、5.3 條的要求。</p>	<p>Operation shall be performed continuously at a rate of 30 cycles per minute load as follow, (Cycles reference drawing) 0.5mA 5VDC 在帶以下負荷的條件下，速度為 30 次/分，在壽命試驗設備上連續轉換(次數參見圖紙) 0.5mA 5VDC</p>





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8. Weather Proof Characteristics 耐候性能:

No.	Item 項目	tandard 标准	Test Method 测试方法
8.1	Gold Proof 低溫	<p>After test, Contact resistance: 5Ω Max. Insulation resistance: 10MΩ Min.</p> <p>The Electrical performance requirements specified shall be satisfied.</p> <p>實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 電氣性能應符合第 4 項要求。</p>	<p>The test piece shall remain free for 96 hours in a temperature control box of <math>-40 \pm 2^{\circ}\text{C}</math>, and then recover for 1 hour at normal temperature and humidity. The test piece shall be measured within 1 hour thereafter. The water droplets shall disappear.</p> <p>試件在 <math>-40 \pm 2^{\circ}\text{C}</math> 的溫控箱內無工作靜態保持 96 小時，然後在正常溫度和濕度下恢復 1 小時，並在此後 1 小時內對試品進行測量，水滴應消失。</p>
8.2	Hot Proof 高溫	<p>The test piece is kept at 96 hours without working pressure in the temperature control box of <math>85 \pm 2^{\circ}\text{C}</math>, then recovered at normal temperature and humidity for 1 hour, and measured within 1 hour after that, the water droplets should disappear.</p> <p>試件在 <math>85 \pm 2^{\circ}\text{C}</math> 的溫控箱內無工作靜態保持 96 小時，然後在正常溫度和濕度下恢復 1 小時，並在此後 1 小時內對試品進行測量，水滴應消失。</p>	<p>After testing at <math>40 \pm 2^{\circ}\text{C}</math>, 90~95% RH for 96 hours, the encoder shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated.</p> <p>試件在 <math>40 \pm 2^{\circ}\text{C}</math>, 90~95%RH 的溫控箱內無工作靜態保持 96 小時，然後在正常溫度和濕度下恢復 1 小時，並在此後 1 小時內對試品進行測量，水滴應消失。</p>
8.3	Moisture Resistance 恒定濕熱	<p>After test, Contact resistance: 5Ω Max. Insulation resistance: 10MΩ Min.</p> <p>The Electrical performance requirements specified in item 4.3-4.5 shall be satisfied.</p> <p>實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 電氣性能應符合第 4.3-4.5 條的要求。</p>	<p>After testing at <math>40 \pm 2^{\circ}\text{C}</math>, 90~95% RH for 96 hours, the encoder shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated.</p> <p>試件在 <math>40 \pm 2^{\circ}\text{C}</math>, 90~95%RH 的溫控箱內無工作靜態保持 96 小時，然後在正常溫度和濕度下恢復 1 小時，並在此後 1 小時內對試品進行測量，水滴應消失。</p>



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No.	Item 項目	tandard 标准	Test Method 测试方法
8.4	Temperature Cycling 温度转换	<p>After test, Contact resistance: 5Ω Max. Insulation resistance: 10MΩ Min. The electrical performance requirements specified in item 4.3-4.5 shall be satisfied.</p> <p>實驗後： 接觸電阻：5Ω Max. 絕緣電阻：10MΩ Min. 電氣性能應符合第 4.3-4.5 條的要求。</p>	<p>After 5 cycles of following conditions, the encoder shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated.</p> <p>試件按下述實驗條件試驗 5 次，然後在正常溫度和濕度下恢復 1 小時，並在此後 1 小時內對試品進行測量，水滴應消失。</p>
8.5	Salt Mist 盐雾实验	<p>After the test is dried, there are no corrosion spots on the metal parts that affect the performance of the product, and the electrical properties should meet the requirements of Article 4.</p> <p>試驗乾燥後，在金屬件上沒有影響產品性能的腐蝕斑點，電氣性能應符合第 4 條的要求。</p>	<p>The encoder shall be checked after the following test:</p> <ol style="list-style-type: none"> <li>(1) Temperature: 35±2° C</li> <li>(2) Salt Solution: 5±1% (Solids by mass).</li> <li>(3) Salt deposit shall be removed by running water.</li> <li>(4) Duration: 24 hours</li> </ol> <p>試件在下述實驗後測量：</p> <ol style="list-style-type: none"> <li>(1) 溫度：35±2°C</li> <li>(2) 鹽溶液濃度：5±1%（品質百分比）。</li> <li>(3) 鹽沉積物用水沖掉。</li> <li>(4) 時間：24 小時</li> </ol>
8.6	Vulcanization test 硫化试验	<p>After the test is dried, there are no corrosion spots on the metal parts that affect the performance of the product, and the electrical properties should meet the requirements of Article 4.</p> <p>試驗乾燥後，在金屬件上沒有影響產品性能的腐蝕斑點，電氣性能應符合第 4 條的要求。</p>	<p>The specimens were tested under the following conditions:</p> <ol style="list-style-type: none"> <li>(1) Temperature :35±2°C</li> <li>(2) Sodium sulfide solution concentration 2% (mass percentage).</li> <li>(3) Time :2 minutes.</li> </ol> <p>試件按下述條件實驗：</p> <ol style="list-style-type: none"> <li>(1) 溫度：35±2°C</li> <li>(2) 硫化钠溶液濃度：2%（品質百分比）。</li> <li>(3) 時間：2 分鐘。</li> </ol>



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### 9. Management of environmental hazardous substances 環境危害物質管理

This product complies with the "√" hook under the environmental hazardous substances management standard selection.

本產品符合下方“√”勾選的環境危害物質管理標準。

√	本產品符合歐盟 ROHS 2.0 標準要求.
	本產品符合 HF 標準要求.
	本產品符合 REACH 標準要求.

### 10. Storage condition 贮存条件:

10.1 In order to protect the switch performance and the soldering conditions, it should keep the switch under the following conditions:

為防止本產品的性能劣化和耐焊性等性能受到影響，請保管在以下的條件和環境下：

10.1.1. Temperature of 0°C-50°C, with humidity lower than 65%RH;

溫度 0°C-50°C ，濕度65% 以下的環境。

10.1.2. Avoid storing in the environment containing corrosive gas;

避免保存在含有腐蝕性氣體等的空氣中。

10.1.3. Avoid keeping it in the location with direct sunlight.

避免保存在日光能直射的場所。

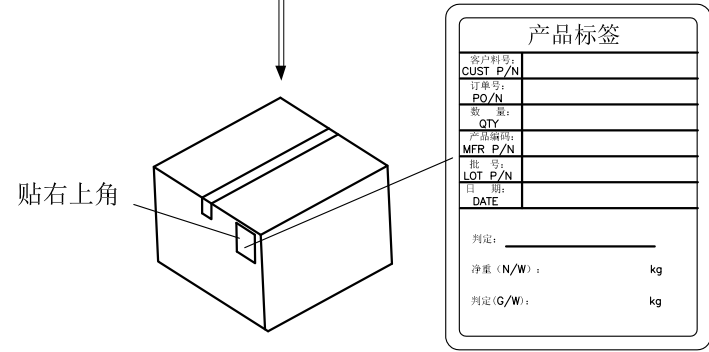
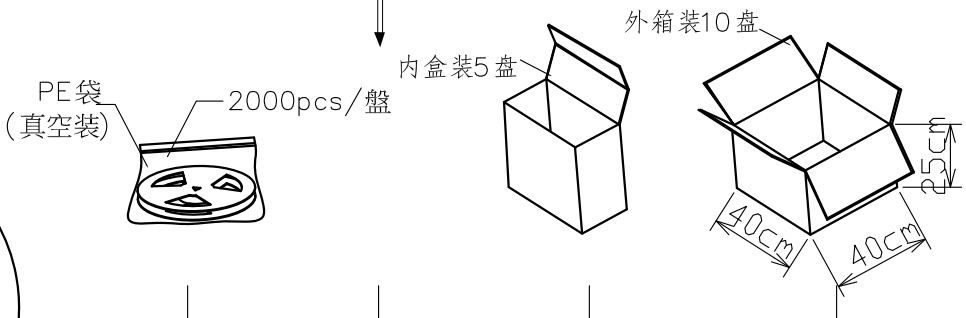
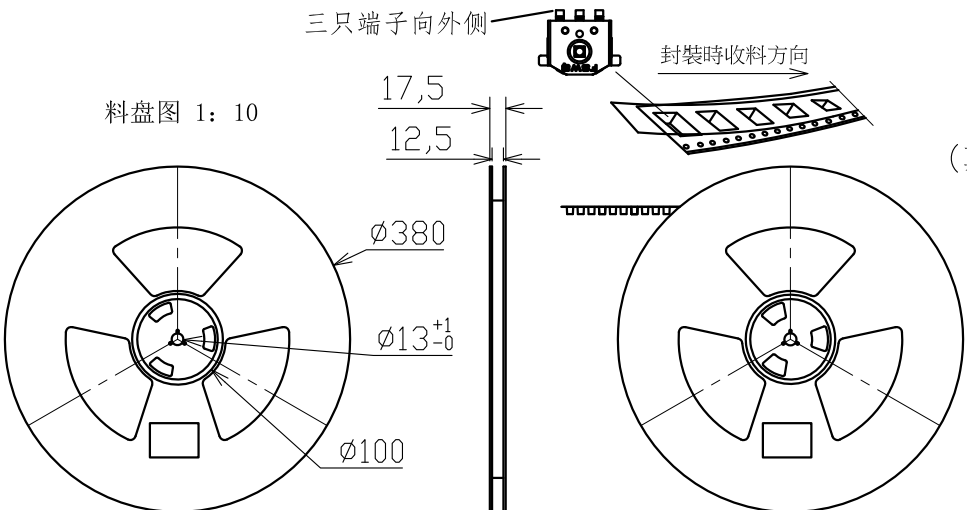
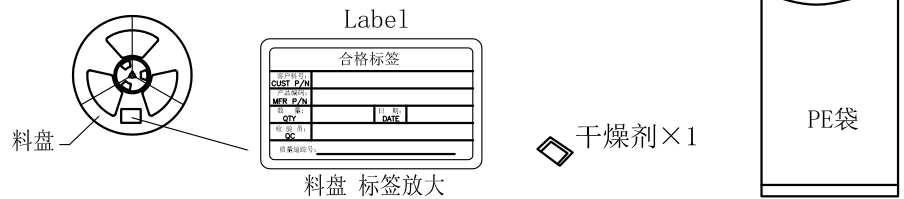
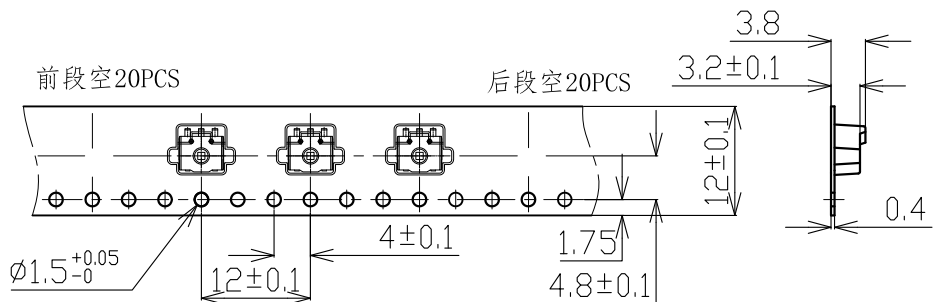
10.1.4. Store using the standard packing without exerting force.

在不施加負重外力的包裝狀態下進行保管。

10.2 The standard storage period is 6 months before opening the package. Preferably to be used as soon as possible. After opening the package, you should put the remaining switches in a plastic bag to prevent from damp and corrosive gas with maximum up to 3 months.

產品未打開包裝的保存標準期限為 6 個月。打開包裝後有剩餘品時，應將剩餘部分以膠袋包裝好以同外界隔離，請進行合適的防濕，防腐蝕氣體等處理後進行保管，保存期限為 3 個月。

10 9 8 7 6 5 4 3 2 1



每箱装20000PCS

包装要求:

1. 料盘封装时, 应按图纸要求的方向进行封装。
2. 每盘封装2000pcs成品, 要求每盘前段与后段各空至少20pcs。
3. 标签贴于料盘标签处, 并一致朝上。
4. 使用PE胶袋封装, 并置入1包干燥剂, 以热封式封住袋口, 每袋装1盘。
5. 将包好的料盘平置于箱中(一箱装10个料盘)。
6. 将三角板置于箱中四个角落, 然后用胶带封合。
7. 在外箱填写上与出货型号相应的产品信息。
8. 在包装箱一侧右上角贴上物料标签, 标签须填写清晰。

A	4	修改 MODIFY	F-SWITCH ELECTRONICS CO.,LTD.				单位 UNIT	mm	设计 DSGD	审核 CHKD	核准 APPD		
	3						一般公差 GENERAL TOLERANCE	X±0.50	X.° ±5°	DCC 2022.11.21 王宝莲	R&D 2022.11.21 陈列	黄炎 2022.11.21 牛奕卫奇	
	2		名称 TITLE	E5微型编码器包装图		材料 MATERIAL		比例 SCALE	1.3:1				版本 REV.
	1		料号 PART NO.	/		体积 VOLUME	.XXX±0.1	图幅 SIZE	A4	张数 SHEET	1/1	图类 TYPE	包装图
	VER.		图号 DRAWING NO.	FSE5-WI-PK-001		重量 WEIGHT		角法 P R O J.					

10 9 8 7 6 5 4 3 2 1