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产 品 承 认 书

Specification for Approval

客户名称 Customer		客户代码	
客户部件料号 Customer Part No.			
产品型号 Product Model	编码器 Encoder		
F-SWITCH 料号 Company Part No.	E8H8-7.5J30-9B15-F200		
产 品 规 格 Prduct SPEC.	外贴片 SMT 型, 7.8×7.2×4.1mm 編碼器, 安裝高度 7.5mm, 轴徑 3.0mm (咖啡色), 扭力 30gf, 开关按力 200gf, 9 脉冲 18 定位, 壽命 10 萬次.		

客户确认 Customer confirmation		公司确认 Company confirmation	
采购 Purchase		制作 Prepared by	
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工程 Engineer		批准 Approved by	
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P2-P19: Specification;
P10: Paking drawing

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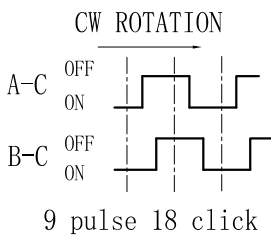
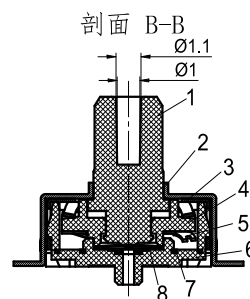
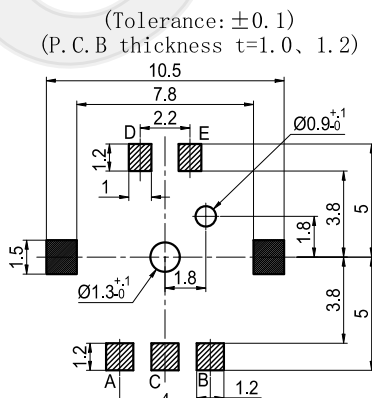
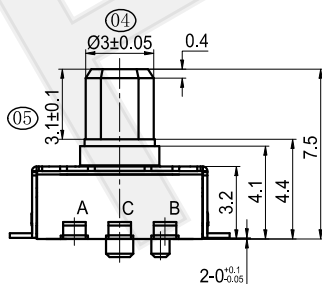
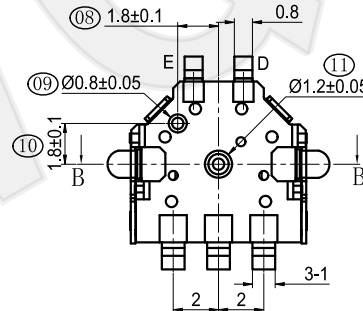
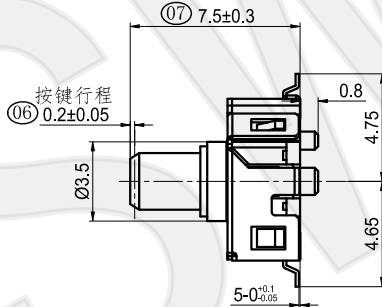
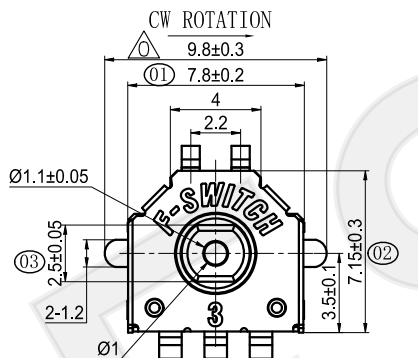
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F-SWITCH ELECTRONICS CO.,LTD.

名称 TITLE	ENCODER	料号 PART NO.	E8H8-7. 5J30-9B15-F200	图号 DRAWING NO.	FSE8-WI-DR-065
规格 SPEC	外贴片SMT型, 7.8×7.2×4.1mm 编码器, 安装高度7.5mm, 轴径3.0mm (咖啡色), 扭力30gf, 开关按力200gf, 9脉冲18定位, 寿命10万次.				

No.	Items	Standard	No.	Items	Standard
1(1.2)	Operating Temperature Range	-25℃to +85℃	20(7.1)	Mechanical Life	100,000 cycles(30 t/min, Torque attenuation ±50%)
2(1.3)	Operating Relative Humidity	≤85% RH	21(7.2)	Electronics Life	100,000 cycles(30 t/min, Torque attenuation ±50%)
3(3)	Ratings	DC 5V (Max 50mA ,Min 0.5mA)	22(7.3)	Switch Mechanical Life	100,000 cycles(60 t/min, Torque attenuation ±50%)
4(4.1)	Contact Resistance	200mΩ Max(Initial status).	23(7.2)	Switch Electronics Life	100,000 cycles(60 t/min, Torque attenuation ±50%)
5(4.2)	Insulation Resistance	10MΩ Min(Initial status).	24(8.1)	Cold Proof	-25±2℃ 96h
6(4.3)	Dielectric Voltage	AC100V · 60s	25(8.2)	Hot Proof	85±2℃ 96h
7(4.4)	Output signal format	C.W., 9pulse/360°,A(A~C),B(B~C)	26(8.3)	Moisture Resistance	40±2℃ , 90-95%RH 96h
(5.2)		C.C.W., 9pulse/360°,B(B~C),A(A~C)	27(8.4)	Temperature Cycling	-25~85℃ , change 5 cycles
8(4.4)	Phase-different	T1,T2,T3,T4 ≥ 4mS	28(8.5)	Salt Mist	5% NaCl 24h
9(4.5)	Chattering	t1,t3 ≤ 3mS	29(8.6)	Vulcanization test	2% Na2s 2 minutes
10(4.5)	Bounce	t2 ≤ 2mS	Dimensions:		
11(5.1)	Detent points	18 detent points,each angle:20°±3°	01	7.8±0.2mm	11 1.2±0.05mm
12(5.3)	Rotational force	30±10gf.cm (Initial status)	02	7.15±0.3mm	
13(5.4)	Push force	200±50gf (Initial status)	03	2.5±0.05mm	
14(5.5)	Restoring force	30gf (Initial status)	04	Ø3.0±0.05mm	
15(5.7)	Shaft play in axial direction	3° Max	05	3.1±0.1mm	
16(5.8)	Axial push pull Strength	50N, 60S.	06	0.2±0.05mm	
17(5.9)	Terminal Strength	3N, 10S.	07	7.5±0.3mm	
18(6.1)	Solder Ability	260℃±5℃ Max, 5S Min	08	1.8±0.1mm	
19(6.2)	Solder Heat Resistance	SMT Soldering 260℃±5℃ 5S Max, 245℃ 40s Max	09	0.8±0.05mm	
		Manual Soldering 330±10℃ 3S Max	10	1.8±0.1mm	



Push Switch
(独立线路结构)

D ——— E

1. 材质清单 Material list

项目 ITEM	名称 Name	材质 MATERIAL
1	转轴 Shaft	工程塑料(LCP)咖啡色
2	盖片 Cover	铜合金 Copper alloy
3	定位片 Anchor Plate	不锈钢 Stainless Steel Strips
4	齿轮 Wheel gear	工程塑料(PA46)
5	接触片 Contact Spring	磷铜合金 Copper alloy
6	底座 Base	工程塑料(PA46)棕色
7	端子 Terminal	磷铜合金 Copper alloy
8	弹片 Spring	不锈钢 Stainless Steel Strips

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
0	焊锡脚由原尺寸:10.15mm, 修改为: 9.8mm。	wang	20230602	L<5 ±0.2	mm	1/1	A4	成品图
1	转轴颜色由原黑色, 修改为咖啡色。	wang	20240715	L<10 ±0.3	版本 REV.	设计 DSGD	审核 CHKD.	核准 APPD.
2				L<30 ±0.5	A2	DCC	R&D	黄炎
3				.X° ±2° X.° ±5°	比例 SCALE	2024.07.22	2024.07.22	2024.07.22
4				角法 PROJ.	5:1	王宝莲	陈列	牛安卫奇



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	产品编码 PART NO.	E8H8-7.5J30-9B15-F200		

1. General Characteristics 一般特性:

- 1.1 Application: This specification is applied to rotary encoder used for general application.
适用范围: 该承认书适用于旋转编码开关的一般使用范围。
- 1.2 Operating Temperature Range: -40°C to $+85^{\circ}\text{C}$
使用温度范围: -40°C to $+85^{\circ}\text{C}$
- 1.3 Operating Relative Humidity: $\leq 85\%$ RH
相对湿度: $\leq 85\%$ RH
- 1.4 Test Conditions: Unless otherwise specified, the atmospheric conditions for making measurements and tests are as follows:
实验条件: 若没有特别说明, 则试验大气条件如下:
Environment Temperature: 5°C ~ 35°C
环境温度: 5°C ~ 35°C
Relative Humidity: 45% ~ 85%
相对湿度: 45% ~ 85%
Atmospheric Pressure: $86\sim 106\text{Kpa}$ ($860\sim 1060\text{mbar}$)
大气压力: $86\sim 106\text{Kpa}$ ($860\sim 1060\text{mbar}$)

2. Appearance, Structure and Dimensions 外观, 结构及尺寸:

- 2.1 Appearance: The encoder shall have good finishing, and no rust, crack or plating defects.
外观: 产品外观良好, 无锈蚀、裂纹和镀层缺陷。
- 2.2 Structure & Dimensions: Refer to individual product drawing.
结构及尺寸: 参见产品图纸
- 2.3 Markings: Refer to individual product drawing.
标识: 参见产品图纸。

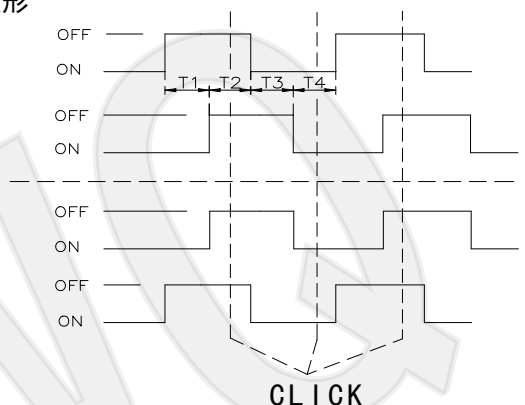
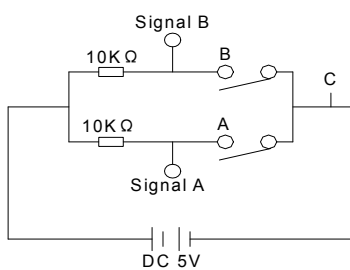
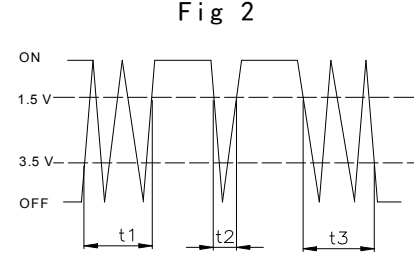
3. Ratings 额定负荷: DC 5V (Max 50mA, Min 0.5mA)

4. Electrical Characteristics 电气特性:

No.	Item 项目	Criteria 标准	Test Method 实验方法
4.1	Contact Resistance 接触电阻	$200\text{m}\Omega$ Max. (初始值 initial value)	Using the micro resistance tester with error less than 5% for testing. 使用误差小于 5% 的微电阻测试仪进行测试。
4.2	Insulation Resistance 绝缘电阻	$10\text{M}\Omega$ Min. (初始值 initial value)	Using the insulation resistance tester, setting parameters to DC100V, The insulation resistance between the terminal and the cover, the terminal and the terminal is test, time is 60 seconds. 使用绝缘电阻测试仪, 设置参数为 DC50V, 测试端子与外壳, 端子与端子之间的绝缘阻抗, 时间 60s
4.3	Dielectric Voltage 抗电强度	No dielectric breakdown shall occur. 无击穿现象发生。	Using the voltage resistance tester, set the parameters to the AC100V, test the voltage resistance between the terminal and cover or terminal and terminal, time is 60s. 使用耐电压测试仪, 设置参数为 AC100V, 测试端子和外壳或端子与端子之间的耐电压、时间 60s。



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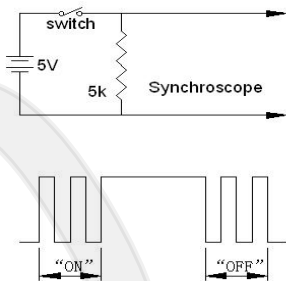
No.	Item 项目	Tandard 标准	Test Method 测试方法
4.4	Output signal format 输出信号	T1, T2, T3, T4 \geq 4mS	2 Phase-different signals (signalA, signalB) Derails shown in (The broken line shows detent position.) A、B 两信号输出相位差，输出波形详细见图，卡点位置如下图所示（虚线表示带卡点装置的上擎子处位置）
		Shaft rotational direction 轴回转方向	Signal (Between terminals) 信号（端子之间） Output 输出波形
		C. W.	A (A~C) B (B~C)
		C. C. W.	A (A~C) B (B~C)
			
4.5	Switching characteristics 切换特性	Chattering 振动 Fig. 2 t1, t3 \leq 3ms	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 (i.e. from high voltage 3.5V to low voltage 1.5V), test circuit generates vibration time, when every times. 将编码器按图 1 的电路接在示波器上，编码器每秒钟转动 360 度，当电路从 ON 到 OFF 的瞬间（即从高电压 3.5V 转换到低电压 1.5V 时），每次转换时，测试电路产生振动的时间。  
		Sliding noise (Bounce) 跳动 Fig. 2 t2 \leq 2ms	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 change more than 1.5V voltage position. In the ON region, In the ON region, the voltage change more than 1.5V phenomenon occurs more than 2 times, it is considered to be continuous beating. 将编码器按图 1 的电路接在示波器上，编码器每秒钟转动 360 度，当电路在 ON 区域时，测试电路产生跳动的的时间。跳动位置的获取应在 ON 区域，电压变化超过 1.5V 电压的位置。 在 ON 区域，电压变化超过 1.5V 的现象出现 2 次以上的，被认为是连续跳动。



丰实卫奇电子科技有限公司

F-SWITCH ELECTRONICS CO., LTD.

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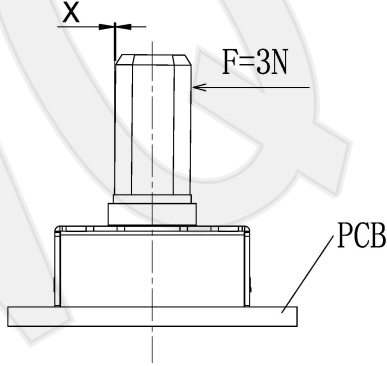
No.	Item 项目	tandard 标准	Test Method 测试方法
4.6	Bounce 抖动(带开关功能适用)	ON bounce: 10ms max. OFF bounce: 10ms max. ON 抖动时间: 10ms max. OFF 抖动时间: 10ms max.	<p>Lightly striking the center of the stem at a rate encountered in normal use (3 to 4 operations per sec.) bounce shall be tested at "ON" and "OFF". 以 3-4 次/sec 的速度按压</p> 

5. Mechanical Characteristics 机械特性

No.	Item 项目	tandard 标准	Test Method 测试方法
5.1	Detent points 执子点数与位置	18 detent points each detent angle: $20^{\circ} \pm 3^{\circ}$ 18 点执子 每点角度: $20^{\circ} \pm 3^{\circ}$	
5.2	Output waves 输出波形数	9 pulse/360° 9 脉波/360°	
5.3	Rotational force 旋转力矩	Reference spec drawing sheet 参见图纸	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. 把测试头插入转轴中, 沿轴的转动方向, 使用均匀的旋转力进行测试。
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	Pre Travels 行程(带开关功能适用)	Reference spec drawing sheet 参见图纸	The distance vertically through, which the midpoint of the actuator (or tip of the shaft) trip move from its free position to operating position. 从自由位置到动作位置的距离。

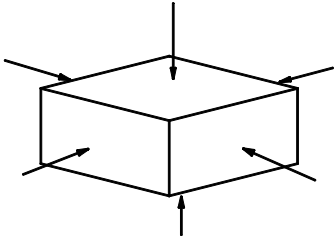


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No.	Item 项目	standard 标准	Test Method 测试方法
5.7	Shaft play in axial direction 轴向摆动	Axial swing angle: 3° Max The electrical performance requirements specified shall be satisfied. 轴向摆动角度: 3° Max 电气性能应符合要求。	<p>The encoder is welded to the printed circuit board, Apply 3N static pressure in any direction to measure the deviation angle of the shaft. Test the 4 directions as described above. 编码器焊接在印刷电路板上, 任意方向施加 3N 静压力, 测量轴的偏移角度。按上述方法持续 4 个方向。</p> 
5.8	Axial push pull strength 轴向推拉强度	The electrical performance requirements specified shall be satisfied. 电气性能应符合第 4 项要求。	<p>Push or pull vertically at the top of the shaft, applying a static pressure of 50N for 60 seconds 在轴的顶端垂直推或拉, 施加 50N 的静压力, 持续 60S。</p>
5.9	Terminal Strength 端子强度	Shall be free from terminal looseness, damage and insulator breakage. The electrical performance requirements specified shall be satisfied. 端子无松动, 损坏及绝缘层的破裂。 电气性能应符合第 4 项要求。	<p>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 作用力于接线端末端, 持续时间 10s。</p>



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No.	Item 项目	tandard 标准	Test Method 测试方法
5.10	Vibration Proof 振动	After test, Contact resistance:5Ω Max. Insulation resistance:10M Ω Min. The electrical performance requirements specified shall be satisfied. No abnormalities shall be recognized in appearance and construction. 实验后: 接触电阻: 5Ω Max. 绝缘电阻: 10MΩ Min. 电气性能应符合要求。 表面及结构无明显变形。	Encoder shall be secured to a testing machine by a normal mounting device and method. Encoder shall be tested according to the following request: (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: linear (5) Direction of vibration: Three perpendicular directions including actuating direction. (6) Duration: 2 hours (6 hours in total) 编码器采用常规的安装方法牢固地安装在试验设备上, 并在下述参数条件下进行试验: (1) 振频=10-55Hz (2) 振幅 1.5mm (3) 振动变化速率: 10-55-10Hz 大约 1 分钟 (4) 变频方法: 线性型式 (5) 振动方向: 三个相互垂直的方向, 其中一个方向应 是促动元件运动的方向。 (6) 时间: 每个方向 2 小时 (共 6 小时)。
5.11	Mechanical Shock 冲击	After test, Contact resistance: 5Ω Max. Insulation resistance:10M Ω Min. The Electrical performance requirements specified shall be satisfied. Shall be free from mechanical abnormalities. 实验后: 接触电阻: 5Ω Max. 绝缘电阻: 10MΩ Min. 电气性能应符合要求。 表面无变形且操作无异常。	Encoder shall be tested according to the following request: (1) Mounting Method: Normal (2) Acceleration: 490m/s ² (50G) (3) Duration: 11ms (4) Test Direction: 6 directions (5) Number of shocks: 3 times per direction (18 times in total) 编码器在下述参数条件下进行试验: (1) 安装方法: 常规方法 (2) 加速度: 490m/ s ² (50G) (3) 时间: 11ms (4) 实验方向: 图示 6 方向 (5) 冲击次数: 每个方向 3 次 (总共 18 次) 



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6. Soldering Characteristics 焊接性能

No.	Item 项目	tandard 标准	Test Method 测试方法
6.1	Solder Ability 可焊性	Dip area should be more than 85% 浸锡面积应该超过 85%	Encoder shall be tested according to the following request: (1) Solder: Normal (2) Flux: Rosin Flux having a nominal composition of 25% solids by mass of water white rosin in methyl alcohol solution. (3) Soldering Temperature: $260 \pm 5^{\circ}\text{C}$ Immersing Time: $3 \pm 1\text{s}$ Flux immersing time shall be 5 ~10s in normal room temperature. (4) Immersion Depth: Immersion depth shall be at copper plating portion of PCB after mounting. (Thickness of PCB=1.6mm) 编码器在下述参数条件下进行试验: (1) 焊料: 常规 (2) 焊剂: 焊剂, 质量百分比为 25%松香, 75%甲醇的无色透明溶液。 (3) 焊接温度: $260 \pm 5^{\circ}\text{C}$ 浸渍时间: $3 \pm 1\text{s}$ 焊剂浸渍时间: 5-10s (4) 浸渍深度: 接线端应浸到离开关根部 1.6mm 处。
6.2	Solder Heat Resistance 耐焊接热	After test, No abnormalities shall be observed in appearance and operation. Torque decay $\pm 50\%$. Contact resistance: 5Ω Max. Insulation resistance: $10\text{M}\Omega$ Min. The Electrical performance requirements specified shall be satisfied. 實驗後: 無外觀、熔膠變形不良, 扭力衰變 $\pm 50\%$ 。 接觸電阻: 5Ω Max. 絕緣電阻: $10\text{M}\Omega$ Min. 電氣性能應符合第 4 項要求。	The filter is tested under the following parameters: (1) Mode of welding: SMT (2) Welding temperature and time: Welding : $260 \pm 5^{\circ}\text{C}$ 5S MAX (3) Manual welding : $330 \pm 10^{\circ}\text{C}$ 3S 編碼器在下述參數條件下進行試驗: (1) 焊接方式: SMT (2) 焊接溫度及時間: 自動焊接: $260 \pm 5^{\circ}\text{C}$ 最多 5S 。 (3) 手工焊接: $330 \pm 10^{\circ}\text{C}$ 3S <p>回流焊</p>



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7. Durability characteristics 耐久性能

No.	Item 项目	tandard 标准	Test Method 测试方法
7.1	Encoder Life 编码器寿命	After test Contact resistance: 5Ω Max. Insulation resistance:10MΩ Min. The decay of the operating force should be within ±50%. The electrical performance requirements specified shall be satisfied. 实验后: 接触电阻: 10Ω Max. 绝缘电阻: 10MΩ Min. 操作力衰变应在±50%以内。 电气性能应符合要求。	Operation shall be performed continuously at a rate of 30 cycles per minute without load, (Cycles reference drawing) 在不带负荷的条件下, 速度为 30 次/分, 在寿命试验设备上连续转换, (次数参见图纸)
7.2	Switch Life 开关寿命(带开关功能适用)	After test Contact resistance: 5Ω Max. Insulation resistance:10MΩ Min. The decay of the operating force should be within ±50%. The electrical performance requirements specified shall be satisfied. 实验后: 接触电阻: 10Ω Max. 绝缘电阻: 10MΩ Min. 操作力衰变应在±50%以内。 电气性能应符合要求。	Operation shall be performed continuously at a rate of 30 cycles per minute load as follow, (Cycles reference drawing) 0.5mA 5VDC 在带以下负荷的条件下, 速度为 30 次/分, 在寿命试验设备上连续转换(次数参见图纸) 0.5mA 5VDC

8. Weather Proof Characteristics 耐候性能:

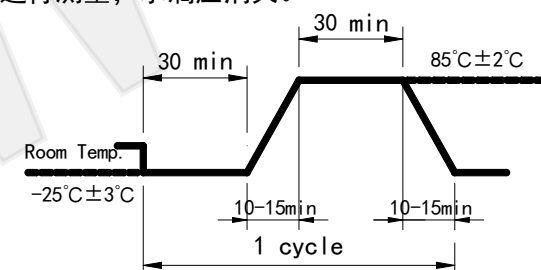
No.	Item 项目	tandard 标准	Test Method 测试方法
8.1	Cold Proof 低温	After test, Contact resistance: 5ΩMax. Insulation resistance: 10MΩ Min. The Electrical performance requirements specified shall be satisfied.	After testing at -40 ± 2° C for 96 hours, the encoder shall be allowed to stand under normal temperature and humidity conditions for 1 hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated. 试件在-40±2℃的温控箱内保持 96 小时, 然后在正常温度和湿度下恢复 1 小时, 并在此后 1 小时内对试品进行测量, 水滴应消失。
8.2	Hot Proof 高温	实验后: 接触电阻: 5Ω Max. 绝缘电阻: 10MΩ Min. 电气性能应符合第 4 项要求。	After testing at 85 ± 2° C 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. 试件在 85±2℃的温控箱内保持 96 小时, 然后在正常温度和湿度下恢复 1 小时, 并在此后 1 小时内对试品进行测量, 水滴应消失。



丰实卫奇电子科技有限公司

F-SWITCH ELECTRONICS CO., LTD.

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No.	Item 项目	tandard 标准	Test Method 测试方法
8.3	Moisture Resistance 恒定湿热	After test, Contact resistance: 5Ω Max. Insulation resistance: 10MΩ Min. The Electrical performance requirements specified in item 4.3-4.5 shall be satisfied. 实验后: 接触电阻: 5Ω Max. 绝缘电阻: 10MΩ Min. 电气性能应符合 4.3-4.5 条的要求。	After testing at 40±2° C, 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. 试件在 40±2°C, 90~95%RH 的温控箱内保持 96 小时, 然后在正常温度和湿度下恢复 1 小时, 并在此后 1 小时内对试品进行测量, 水滴应消失。
8.4	Temperature Cycling 温度转换	After test, Contact resistance: 5Ω Max. Insulation resistance: 10MΩ Min. The Electrical performance requirements specified in item 4.3-4.5 shall be satisfied. 实验后: 接触电阻: 5Ω Max. 绝缘电阻: 10MΩ Min. 电气性能应符合 4.3-4.5 条的要求。	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. 试件按下述实验条件试验 5 次, 然后在正常温度和湿度下恢复 1 小时, 并在此后 1 小时内对试品进行测量, 水滴应消失。 
8.5	Salt Mist 盐雾实验	No remarkable corrosion effecting product function shall be recognized in metal part. 在金属件上没有影响产品性能的腐蚀斑点。	The encoder shall be checked after the following test: (1) Temperature: 35±2° C (1) Salt Solution: 5±1% (Solids by mass). (3) Salt deposit shall be removed by running water. (4) Duration: 24 hours 试件在下述实验后测量: (1) 温度: 35±2°C (2) 盐溶液浓度: 5±1% (质量百分比)。 (3) 盐沉积物用水冲掉。 (4) 时间: 24 小时
8.6	Vulcanization test 硫化试验	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. 试验干燥后, 在金属件上没有影响产品性能的腐蚀斑点, 电气性能应符合第 4 条的要求。	The specimens were tested under the following conditions: (1) Temperature : 35±2°C (2) Sodium sulfide solution concentration 2% (mass percentage). (3) Time : 2 minutes. 试件按下述条件实验: (1) 温度: 35±2°C (2) 硫化钠溶液浓度: 2% (品质百分比)。 (3) 时间: 2 分钟。



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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。

