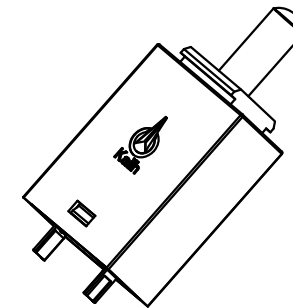
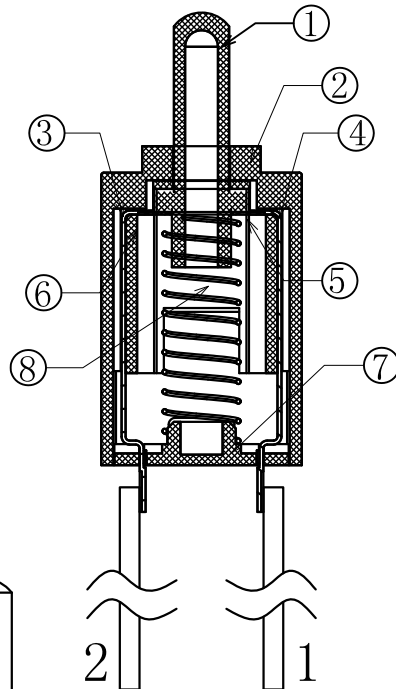
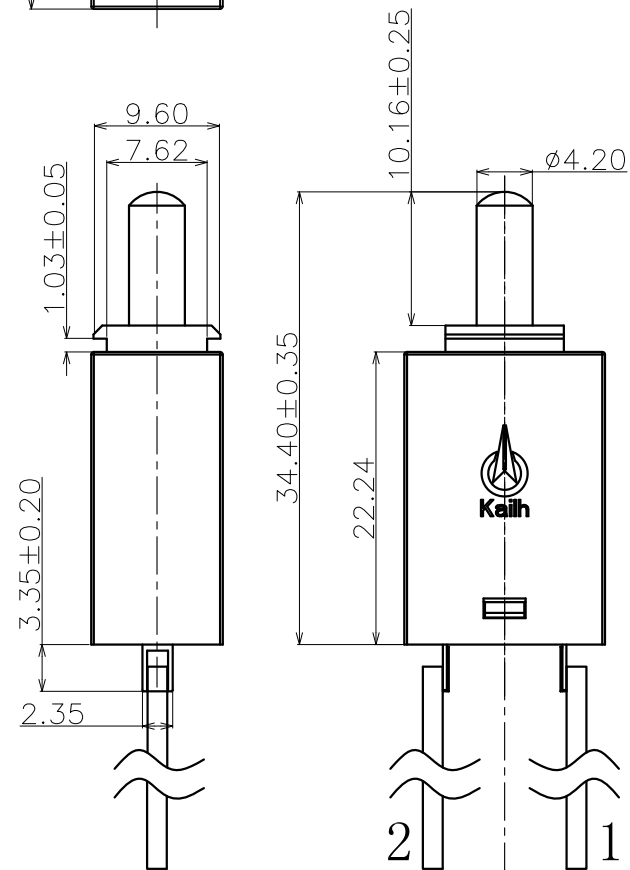
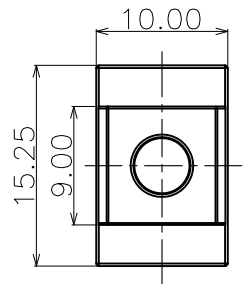


ABIDE BY Kailh GP



PART NUMBER	SWITCH FUNCTION		SCHEMATIC
	POS. 1	POS. 2	
CPG152401W05			SPST N. C.

■ Specification ::

- 1.Contact Rating : AC/DC20V 0.4A(Max)
- 2.Contact Resistance : 50mΩ Max.
- 3.Insulation Resistance : 100MΩ Min(DC250V)
- 4.Withstand Voltage : AC500V(50-60Hz)for 1 minute
- 5.Operation Force : 180±50gf
- 6.Travel : Pretravel : 1.20mm(Max) Overtravel : 9.50±0.8mm
- 7.Mechanical & Electrical Life : 10,000 Cycles(min)

⑧	Spring	—	1	Steel	—	—
⑦	Housing-2	—	1	PA66+G/F30%(HF ROHS)	Black	UL94V0
⑥	Housing-1	—	1	PA66+G/F30%(HF ROHS)	Black	UL94V0
⑤	Movable Contact	—	1	Brass	Plating Gold(3u")	—
④	Terminal-1	—	1	Brass	PlatingAu3u"/Sn120u"	—
③	Terminal-1	—	1	Brass	PlatingAu3u"/Sn120u"	—
②	Shell	—	1	PA66+G/F30%(HF ROHS)	Black	UL94V0
①	Keystoke	—	1	PA66+G/F30%(HF ROHS)	Black	UL94V0
ITEM	PART NAME	TER'NO.	QTY.	MATERIAL	FINISHING	REMARK

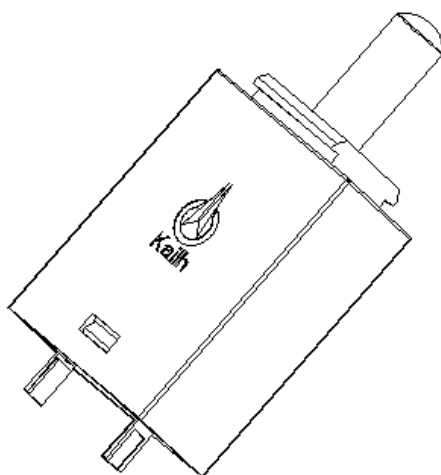
APPROVALS		DATE	东莞市凯华电子有限公司 DONGGUAN CITY KAIHUA ELECTRONICS CO.,LTD			
DRAWN	Harlan	2017-04-13	Kailh			
CHECKED			TITLE: PG1524常闭开关一体式			
APPROVALS			PART NO. CPG152401W05			
TOLERANCES ARE		30 < L	±0.30	ANGLE	UNIT: mm	SCALE: 1:1
		10 < L	±0.20		DRAWING NO.	PROJ:
		5 < L	±0.15		SHEET 1 OF 1	
		L ≤ 5	±0.10	±2°		

ECN NO.	REV.	DATE.	DESCRIPTION.	CHANGE.	CHECK.	APPRO.
	A		NEW			



KH-PS1704-32

Product Specification



CPG152401W05

Encoder Switch

[illegible]



凱華電子
KAIHUA EEELETRONICS

Product Specification

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1. Scope/范围:

This Product Specification covers the requirement of Encoder switch on product performance, test methods and quality assurance provisions.

本规格书内容涵盖产品的要求，包括性能指标、测试方法及质量保证方面等。

2. Product Application/产品应用:

The Switch is applied in all types of Computer mouse. Please let us know before using any of the products in the application not described above.

该产品适用于所有类型的常闭断开功能机构，如果用于本文中未提及的领域请在使用前告知。

3. Technology Parameters/技术参数

Ambient Humidity 工作湿度:	$\leq 85\% \text{ R.H.};$
Operating Temperature Range 使用温度范围:	$-10^{\circ}\text{C} \sim +70^{\circ}\text{C};$
Storage Temperature Range 保存温度范围:	$-20^{\circ}\text{C} \sim +80^{\circ}\text{C};$
Normal Condition:	
Ambient temperature 环境温度:	$20 \pm 5^{\circ}\text{C}$
Relative humidity 相对湿度:	$65\% \pm 5\% \text{ R.H.};$
Air pressure 气压:	$86 \sim 101 \text{ KPa};$
Contact Resistance 接触阻抗:	$50 \text{ m}\Omega \text{ Max};$
Operation Force 操作力:	$180 \pm 50 \text{ gf};$
Solder Ability 可焊性:	$245 \pm 5^{\circ}\text{C}, 3 \pm 1 \text{ s};$
Withstand Soldering Temperature 耐焊接热:	$260 \pm 5^{\circ}\text{C}, 3 \pm 1 \text{ s};$

4. Ratings/额定性能要求

Rating 额定负荷:	$\text{AC/DC } 20\text{V} / 0.4\text{A Max};$
Insulation Resistance 绝缘电阻:	$\geq 100 \text{ M}\Omega / \text{DC } 250\text{V};$
Withstand Voltage 耐电压:	$500\text{V AC } 1 \text{ Minute};$
Life 寿命:	$10,000 \text{ Cycles (Without load).}$

5. Profile Dimensions /外形尺寸

见产品图



6. Electrical Performance/电气性能

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
6.1	Contact Resistance 接触电阻	Measured at low current (100mA or less). 在低电流 ($\leq 100\text{mA}$) 条件下直接测端子.	50m Ω Max 50m Ω 以下
6.2	Insulation Resistance 绝缘电阻	Apply a Voltage of DC 50 V for 1 minute, according to the below method. (1) Between terminals. (2) Between terminal and Body. 输入 250V DC 电压 1 分钟, 按如下接触方法测试: (1) 端子与端子之间. (2) 端子与外壳之间.	100M Ω Min 100 兆欧以上
6.3	Dielectric withstanding voltage 耐电压	Apply a Voltage of AC 50 V (50~60Hz) for 1 minute, according to the below method. (1) Between terminals. (2) Between terminal and Body. 输入 500V AC 电压 1 分钟, 按如下接触方法测试: (1) 端子与端子之间. (2) 端子与外壳之间.	No evidence of breakdown 无瞬断、击穿等破坏



7. Mechanical Performance/机械性能

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
7.1	Operation Force 操作力	Operate the Handle of the switch and then increase press strength gradually, Measured maximum operation force while the travel of the switch is full. 逐渐施力操作开关推柄，测量开关到达全部工作行程时所需的最大操作力度。	180±50gf
7.2	Operation travel 操作行程	Operate the keystroke of the switch vertically, the travel distance of keystroke moving from its free position moving distance shall be measurement. 垂直操作开关按键，测开关顶端移动距离。	(Pre-travel):1.20mm(Max) 断开初始行程 9.50±0.8mm 总行程(Overtravel):
7.3	Operation life 寿命测试	Switch shall be operated continuously at about 20 cycles /min without load.10,000 Min 开关在寿命试验设备上以约 20 次 / 分的速度连续被操作,最少 10,000 次	Life test:10,000cycles After test: Insulation resistance:10M Ω Min Operating force: Change should be within ±50% of specified value. No abnormalities shall be recognized in appearance and construction.寿命: 10,000 次 实验后: 绝缘电阻: 10M Ω Min 操作力: 变化在±50%内 开关外观及结构无损坏。



8. Environmental Performance/环境性能

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
8.1	Solderability 可焊性	The top of the terminals shall be dipped in the solder bath at $245 \pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds. 端子顶部被浸入焊锡炉中, 温度为 $245 \pm 5^{\circ}\text{C}$, 时间 3 ± 0.5 秒.	75 percent of terminals shall be dipped. 引脚至少 95% 上锡.
8.2	Resistance to Heat Test 耐高温测试	(1) Temperature : $80 \pm 2^{\circ}\text{C}$ 温度: $80 \pm 2^{\circ}\text{C}$ (2) Duration of test: 96h 持续时间: 96 小时 (3) Take off a drop water 去掉水珠 (4) Standard conditions after test : 1h 试验后的放置条件: 1 小时	Appearance, electrical and mechanical characteristics shall be satisfied. 外观, 机械及电气性能均符合要求。
8.3	Resistance to Cold Test 耐低温测试	(1) Temperature : $-25 \pm 2^{\circ}\text{C}$ 温度: $-25 \pm 2^{\circ}\text{C}$ (2) Duration of test: 96h 持续时间: 96 小时 (3) Take off a drop water 去掉水珠 (4) Standard conditions after test : 1h 试验后的放置条件: 1 小时	Appearance, electrical and mechanical characteristics shall be satisfied. 外观, 机械及电气性能均符合要求。
8.4	Soldering heat test 耐焊接热	Terminals shall be dipped in the solder bath at $260 \pm 5^{\circ}\text{C}$ for 5 ± 1 seconds without additional force for terminals. 端子焊接部分浸入焊炉, 焊炉温度 $260 \pm 5^{\circ}\text{C}$, 焊接时间 5 ± 1 秒。(焊接时不可于端子施加外力)。	Appearance should be not damaged, electrical and mechanical characteristics shall be satis 本体无变形, 能满足于机械、电气性能.



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Item 項目	Description 項目描述	Test Condition 测试条件	Requirement 规格要求
8.5	Resistance to Humidity Test 耐湿性测试	(1) Temperature : $60 \pm 2^{\circ}\text{C}$ 温度: $60 \pm 2^{\circ}\text{C}$ (2) relative humidity: 90~95% R.H. 相对湿度: 90~95% R.H. (3) Duration of test: 96h 持续时间: 96 小时 (4) Take off a drop water 去掉水珠 (5) Standard conditions after test: 1h 试验后的放置条件: 1 小时	Appearance, electrical and mechanical characteristics shall be satisfied. 外观, 机械及电气性能均符合要求
8.6	Salt Mist Test 盐雾实验	The switch shall be checked after following test: 1. Temperature: $35 \pm 5^{\circ}\text{C}$ 2. Salt solution: $5 \pm 1\%$ (Solids by mass) 3. Duration: the Gold plated part needs 48 hours, and the Tin plated part needs 4 hours. 4. After immersing, salt deposit shall be removed by running water. 试件在下述实验后测量: 1. 温度: $35 \pm 5^{\circ}\text{C}$ 2. 盐溶液浓度: $5 \pm 1\%$ (质量百分比), 3. 试验时间: 镀金部分 48 小时, 镀锡部分 4 小时, 4. 试验后, 将盐沉积物用水冲掉。	No remarkable corrosion shall be recognized in metal parts. 在金属件上没有严重腐蚀斑点。

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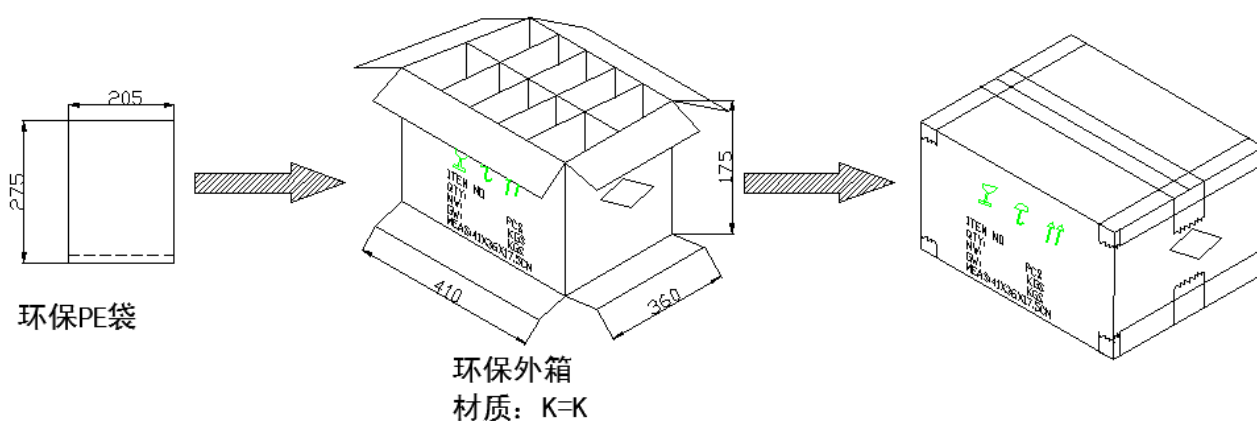
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9. Packaging 包装

300PCS/袋; 7200PCS/箱。



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