

产品规格承认书

SPECIFICATION FOR APPROVAL

温州广通科技有限公司

Wenzhou Gutng Technology Co., Ltd

中国浙江省乐清市淡溪镇第二工业区
邮编：325608

电话：86-577-61307899 61307898

传真：86-577-61307897

E-mail: gutng@gutng.com

承認書

APPROVE SHEET

敬请承认如下之形式规格书:

客户名称 CUSTOMER: _____	
贵公司制品名 CUSTOMER PN: _____	本公司制品名: 船形开关 PRODUCT PN: BOAT SWITCH
贵公司规格 APPROVAL DAT: _____	本公司规格: KCD4 PRODUCT CODE: _____
客户料号 Customer NO: _____	本公司规格书编号: PRODUCT DRAWING NO: _____

☐ 新品承认 NEW APPROVE ☐ 规格变更再承认 CHANGE CODE APPROVE AGAIN ☐ 材料变更再承认 CHANGE MATERIAL APPROVE AGAIN	APPROVAL 批准	CHECK 审查	DESIGN 设计:
	DATE:	DATE:	DATE:

贵公司承认栏

APPROVAL SLGNATURES

印章

请于____年____月____日前承认返

日期 DATE: _____

PLEASE RETURN TO ADMIT XUNIANRURI

KCD BOAT SWITCH SERIES

船形开关说明书

1. General Characteristics 一般特性

1.1 Application : This specification is applied to the mouse micro switch for general applications.

适用范围: 该承认书指船形开关的一般使用范围。

1.2 Operating Temperature Range: 0°C to +125°C

使用温度范围: 0°C ~ +125°C

1.3 Operating Relative Humidity: ≤85%RH

相对湿度: ≤85%RH

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

实验条件: 若没有特别说明, 则实验大气条件如下:

Ambient Temperature: 5 to 35°C

环境温度: 5 ~ 35°C

Relative Humidity: 45 to 85%

相对湿度: 45 to 85%

Air Pressure: 86 to 106Kpa (860 ~ 1060mbar)

大气压力: 86 to 106Kpa (860 ~ 1060mbar)

2. Appearance, Structure and Dimensions

外观, 结构及尺寸

2.1 Appearance : The switch 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

Marking: Refer to individual product drawing .

标识: 参见产品图纸

3. Ratings

额定负荷 15A 250V AC 20A 125V AC

						APPD	CHKD	DSGD	MODEL NO:	
ZONE	SYMB	DATE	APPD	CHKD	DSGD					

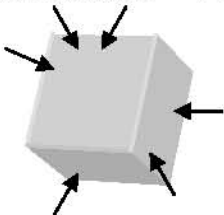
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4. Electrical Characteristics 电气特性			
No	L tem 项目	Test Method 实验方法	Criteria 标准
4.1	Contact Resistance 接触电阻	Measured by a voltage drop method at 15A, 250 VAC. Any equipment with error not more than 5% can be used. resistance after test is the average of 5 successive measurements. 以15A, 250V AC 直接电流, 采用电压降法测量。也可用误差不超过 5%的仪表进行测量, 试验后的电阻取 5 次测量的平均值。	50mΩ Max
4.2	Insulation Resistance 绝缘电阻	500VDC voltage is applied between each pair of terminals and the terminal the metal frame for 60±5S. 相互绝缘的所有端子之间及各接线端子与外露的非载流金属零件之间加载 500V 直流电, 持续时间 60±5S.	100MΩ Min
4.3	Dielectric Voltage 抗电强度	1500VAC (50-60Hz, cut-off current 2mA) is applied between non-connected terminals and between terminals and the metal frame for 5S. 在相互绝缘的所有端子之间 1500V(50-60Hz) 交流电持续时间 5S.	No dielectric breakdown Shall occure 无击穿现象发生.

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4. Electrical Characteristics 电气特性			
No	L tem 项目	Test Method 实验方法	Criteria 标准
4.4	Mechanical Shock 冲击	Switch shall be meadured after following test: (1) Mounting Method :Normal (2) Acceleration:490m/S(50G) (3) Duration: 11ms (4) Test Direction: 6 directions  (5) Number of shocks: 3 times per direction(18times in total) 试件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(50G) (3) 时间: 11ms (4) 实验方向: 图 6 方向 (5) 冲击次数: 每个方向 3 次 (共 18 次)	After test Contact resistance :100mΩ Max Insulation resistance:50MΩMin The electrical performance requirements specified in item 4.3 shall be satisfied. No abnormalities shall be recognized in appearance and construction. 试验后: 接触电阻: 100mΩ Max 绝缘电阻: 50MΩMin 电气性能符合第 4.3 条件的要求。 表面无变形且操作无异常。
4.5	Solder Ability 可焊性	Switch dhall be checked after following test: (1) Solder:H63A(JIS Z3282) (2) Flux: Rosin Flux (JIS K 5902) having a nominal composition of 25 % solids by mass of water white rosin in methyl alcohol (JIS K 1501)solution (3) Soldering Temperature:235±5℃ Immersing Time; 235±5℃ Flux immersing time shall be 5~10s in normal room temperature. (4) Immersion Depth: Immersion depth shall be at copper plating portion lf PCB after mounting, (Thickness of PCB=1.6mm) 试件在下述参数条件下进行试验: (1) 焊料: H63A (JIS Z3282) (2) 焊剂: 焊剂 (JIS K 5902), 质量百分比为 25%松香, 75%甲醇的无色透明溶液。 (3) 焊接温度: 235±5℃ 浸入时间: 235±5℃ 焊剂浸入时间: 5~10s (4) 浸入深度: 接线端子浸到离开关根部 1.6mm 处。	More than 80 % of immersed part shall Be covered with solder. 超过 80%的浸锡面积被焊料所覆盖。

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4. Electrical Characteristics 电气特性			
No	Item 项目	Test Method 实验方法	Criteria 标准
4.6	Solder Heat Resistance 耐焊接热	Switch shall be checked after following test: (1) Solder: H63A (JIS Z3282) (2) Flux: Rosin Flux (JIS K 5902) having a nominal composition of 25% solids by mass of water white rosin in methyl alcohol (JIS K 1501) solution (3) Soldering Temperature & Immersing time Dip soldering 260±5°C 5±1s Manual soldering 300±5°C 2~3s (4) Immersion Depth (For dip soldering) Immersion depth shall be at copper plating portion of PCB after mounting. (试件在下述参数条件下进行试验: (1) 焊料: H63A (JIS Z3282) (2) 焊剂: 焊剂 (JIS K 5902) 质量百分比为 25% 松香, 75% 甲醇的无色透明溶液。 (3) 焊接温度及浸入时间 自动焊接: 260±5°C 5±1s 手工焊接: 300±5°C 2~3s (4) 浸入深度: (对于手动焊接) 接线端子到离开开关根部 1.6mm 处。	No abnormalities shall be observed In appearance and operation. The electrical performance requirements specified in item 4.3 shall be satisfied. 无外观及功能损坏 电气性能符合第 4.3 条件的要求。
4.7	Resistance To Flux 抗焊剂能力	Witch shall be checked after following test: (1) Solder: H63A (JIS Z3282) (2) Flux: Rosin Flux (JIS K 5902) having a nominal composition of 25% solids by mass of water white rosin in methyl alcohol (JIS K 1501) solution (3) Soldering Temperature: 235±5°C Immersing Time; 235±5°C (4) Immersion Depth: Immersion depth shall be at copper plating portion of PCB after mounting, (Thickness of PCB=1.6mm) 试件在下述参数条件下进行试验: (1) 焊料: H63A (JIS Z3282) (2) 焊剂: 焊剂 (JIS K 5902), 质量百分比为 25% 松香, 75% 甲醇的无色透明溶液 (3) 焊接温度: 235±5°C 焊剂浸入时间: 5~10s (4) 浸入深度: 接线端子浸到离开开关根部 1.6mm 处。	Flux shall not be risen up to contact. The switch shall be free from abnormalities in operation. 焊剂不得上升进入开关内部, 影响接触转换。 试件在操作过程中不应发生变形。

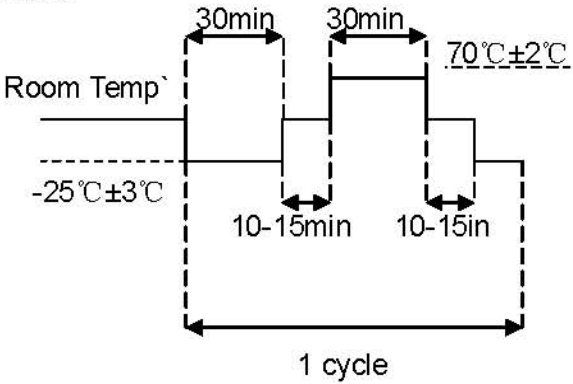
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5.Durability characteristics 耐久性能			
No	L tem 项目	Test Method 实验方法	Criteria 标准
5.1	electric Life 电器寿命	10,000 cycles of operation shall be performed continuously at a rate of 80cycles per minute with 15A, 250V AC 在15A, 250V AC 负荷的条件下, 速度 30 次/分, 在寿命试验设备上连续转换 10,000 次。	After test Contact resistance:500mΩ Max Insulation resistance:10mΩMin Tolerance of operating force disintegration shall be within 30 % of specified value The electrical performance requirements specified in item 4.3 shall be satisfied. The switch shall be free from abnormalities in appearance construction. 试验后: 接触电阻:500mΩ Max 绝缘电阻:10mΩMin 操作力衰变应在±30%以内. 电气性能符合第 4.3 条件的要求. 开关外观及结构应无损坏.
6.Weather proof characteristics 耐候性能			
No	L tem 项目	Test Method 实验方法	Criteria 标准
6.1	Cold proof 低温	After testing at -20±2℃ for 96hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1hour after that. water drops shall be eliminated. 试件在-20±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	After test Contact resistance:500mΩ Max Insulation resistance:10mΩMin Tolerance of operating force disintegration shall be within 30 % of specified value The electrical performance requirements specified in item 4.3 shall be satisfied.
6.2	Hot proof 高温	After testing at 85±2℃for 96hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1hour after that. water drops shall be eliminated. 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.	The switch shall be free from abnormalities in appearance construction. 试验后: 接触电阻:500mΩ Max 绝缘电阻:10mΩMin 操作力衰变应在±30%以内. 电气性能符合第 4.3 条件的要求. 开关外观及结构应无损坏.

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6.Weather proof characteristics 耐候性能			
No	L tem 项目	Test Method 实验方法	Criteria 标准
6.3	Moisture Resistance 恒定湿热	After testing at $40\pm 2^{\circ}\text{C}$ 90~95% RH for 96hour, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1hour after that, water drops shall be eliminated. 试件在 $40\pm 2^{\circ}\text{C}$ 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.	After test Contact resistance:500mΩ Max Insulation resistance:10mΩMin Tolerance of operating force disintegration shall be within 30% of specified value The electrical performance requirements specified in item 4.3 shall be satisfied. The switch shall be free from abnormalities in appearance construction. 试验后: 接触电阻:500mΩ Max 绝缘电阻:10mΩMin 操作力衰变应在$\pm 30\%$以内. 电气性能符合第 4.3 条件的要求. 开关外观及结构应无损坏.
6.4	Temperature Cycling 温度转换	After 5 cycles of following conditions, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1hour 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.  The diagram illustrates one cycle of temperature cycling. It starts at 'Room Temp', which is indicated by a dashed line to be $-25^{\circ}\text{C}\pm 3^{\circ}\text{C}$. The cycle consists of three segments: a 30min dwell at Room Temp, a 10-15min dwell at $-25^{\circ}\text{C}\pm 3^{\circ}\text{C}$, and another 30min dwell at Room Temp. This is followed by a 10-15min dwell at $70^{\circ}\text{C}\pm 2^{\circ}\text{C}$, and finally a 30min dwell at Room Temp. The entire sequence is labeled '1 cycle'.	After test contact resistance:100mΩMax Insulation resistance:10mΩMin The electrical performance requirements specified in item 4.3 shall be satisfied. The switch shall be free from abnormalities in appearance construction. 试验后: 接触电阻:100mΩMax 绝缘电阻:10mΩMin 电气性能符合第 4.3 条件的要求, 开关外观及结构应无损坏

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6.Weather proof characteristics 耐候性能			
No	L tem 项目	Test Method 实验方法	Criteria 标准
6.5	Salt mist 盐雾试验	The switch shall be checked after following test: (1) Temperature: $35 \pm 2^{\circ}\text{C}$ (2) Salt solution: $5 \pm 1\%$ (Solids by mass) (3) Duration: 24 ± 1 hour After test, salt deposit shall be removed by running water. 试件在下述实验后测量: (1) 温度: $35 \pm 2^{\circ}\text{C}$ (2) 盐溶液浓度: $5 \pm 1\%$ (Solids by mass) (3) 时间: 24 ± 1 hour 实验后的盐沉积物用水冲掉.	No remarkable corrosion shall be recognized in metal part. 在金属件上没有腐蚀斑点.
6.6	Temperature Cycling 温度转换	DC Voltage 1.5 times as much as rated voltage shall be applied continuously between adjacent at $60 \pm 2^{\circ}\text{C}$ and $90 \sim 95\% \text{RH}$ for 500 hours, the switch 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. 试件每个相邻端子之间连续加载 1.5 倍于额定电压的直流电压 $60 \pm 2^{\circ}\text{C}$ $90 \sim 95\% \text{RH}$ 的温控箱内保持 500 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.	After test contact resistance: $100\text{m}\Omega \text{Max}$ Insulation resistance: $10\text{m}\Omega \text{Min}$ The electrical performance requirements specified in item 4.3 shall be satisfied. The switch shall be free from abnormalities in appearance construction. 试验后: 接触电阻: $100\text{m}\Omega \text{Max}$ 绝缘电阻: $10\text{m}\Omega \text{Min}$ 电气性能符合第 4.3 条件的要求,开关外观及结构应无损坏/

