


	东莞市溪榜电子有限公司			文件编号	XB-RD-001
	DONG GUAN XI BANG ELECTRONICS CO., LTD			版 号	A-5
	XB-PTM19 (Φ19mm) SERIES 检验规范总则			页 次	1/3
审核	庞东	批准	贺龙飞	生效日期	2024. 02. 18

- 1. General 一般事项:**
- 1-1 Application: This specification is applied to the switch used in electronic equipment.
适用范围: 本规格主要适用于一般电子设备之开关。
- 1-2 Operating Temperature Range 使用温度范围: -20℃~85℃
Operating Humidity Range 使用湿度范围: 10%~85% ;
- 1-3 RH 相对湿度: 45~85%.
- 1-4 Atmospheric Pressure 气压: 860~1060mbr.
- 1-5 Storage temperature and humidity requirements 储存温湿度要求:
Temperature 温度:-5~30℃ Humidity 湿度: 20%~75%
- 2.Appearance Construction and Dimensions 外观、结构、尺寸:**
- 2-1 Appearance: Push button switch shall have good finishing, and shall have no rust, crack or plating failure.
外观: 各部分之加工须良好, 开关上下不能生锈、刮伤、裂痕电镀不良及剥离等现象产生。
- 2-2 cleansing condition: Switch's surface shall avoid contact with oil sludge and shall not be exposed to the air for a long time.
清洁条件: 避免开关表面与空气长间接接触及油渍水溶剂沾污。
- 2-3 Construction and Dimensions: As per product drawing.
结构及尺寸: 依组立图。
- 3. Rating 电器等级:**
- 50mA DC 24V DC
- 4.Electronic performance 电器性能:**

	Property 项目	Test Conditions 测试条件	Standards 判定标准
4.1	Contact Resistance 接触阻抗	Measure by micro-ohm meter at DC <u>0.2</u> V, <u>1A</u> 以微欧姆计之 DC <u>0.2</u> V <u>1A</u> 测之.	Max <u>50</u> m Ω <u>50</u> m Ω 以下
4.2	Insulation Resistance 绝缘阻抗	Measure with DC.500V applied between terminals of open contacts and between terminals of opposite polarity. 以 <u>500</u> VDC 于开路之端子间,及不同回路端子间.	More than <u>100</u> M Ω <u>100</u> M Ω 以上
4.3	Dielectric withstand Strength Test 耐电压	between terminals of open contacts and between terminals of opposite polarity, and between terminals and frame as following. 开关须施以一分钟电压于开路之端子与端子间,不同两极之端子间及外壳与端子间,以下列额定电压测之. 1500 volts for a switch rated more than 250VAC 额定 250VAC 以 1500 伏特测之	A switch shall withstand for 1 minute without breakdown or arc in a potential applied 1 分钟内不能有电弧导通或火花产生

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5.Mechanical performance 机械性能:					
	Property 项目	Test Conditions 试验条件			Standards 判定标准
5.1	Pull test 拉力测试	A static force of 6.6 pound(3kg) being applied in one direction on the tip of the terminal for 1 minute. 拉力测试:施拉以同一方向之 6.6 磅静力(3 公斤)于端子前端一分钟.			The terminal may be deformed, but shall not sustain any trouble as deviation and breaking of terminal and breaking of insulation material 端子可允许变型,但不能有脱离,断裂及开关本体之绝缘部位破坏现象
5.2	Terminal strength 端子强度测试	A static load of 3kgf shall be applied in one direction on the tip of the terminal , there is no subsidence for the terminal of the switch. 在开关端子上施以 3kgf 开关端子无下陷.			Electrical characteristics shall be satisfied, there shall be no distinct looseness or deformation in mechanical system 满足电气性能, 机械性能方面没有明显的松动和变形。
5.3	Operating Force 操作力	The switch should be cable of being operated within a force of 450gram±150gram 开关能够在 450g±150g 范围内动作			Tolerance: ±150g
5.4	Soldering condition 焊锡条件	Temperature and duration of dipping 焊锡温度和浸入时间:			No abnormalities shall be observed in appearance and operation. 外观无显著变型及动作无异常.
		Terminal of lead 导线端子	Temperature 温度 (℃)	Time 时间 (秒)	
		Manual Soldering 手工焊锡	350±5℃	3±0.5sec	
		Note 注意: 1.This product is strictly prohibited wave soldering and reflow soldering, please use the manual welding processing, temperature of 350±5℃and time is 3±0.5 seconds; 本产品严禁使用波峰焊和回流焊, 请使用手工焊焊接加工, 温度为 350±5℃, 时间为 3±0.5 秒; 2.Products after soldering, do not use any solvent to clean, avoid solvent to infiltrate inside the product impact performance. 产品焊接后, 严禁用任何溶剂来清洗, 避免溶剂渗透到产品内部影响性能。			



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5.5	Mechanical life test: 无负载机械寿命测试	The switch applied without electric load 未施电器负载的情况下测试	The switch should operate at least 1000,000 times, without mechanical failure 开关动作次数超过 1000,000 次
5.6	Load life test: 负载寿命测试	The switch applied electric load 电器负载的情况下测试	The switch should operate at least 1000,000 times, without mechanical failure 开关动作次数超过 1000,000 次
5.7	Travel 行程	Push by recommended operating condition:0.8-1.0mm 行程:0.8-1.0mm	Tolerance: ±0.1mm
5.8	Waterproof test 防水测试	Panel IP67 waterproof test 面板 IP67 防水测试	Switch function is normal, no water inside. 开关功能正常, 内部无进水现象.
5.9	Torque test 扭力测试	Torque wrench or related equipment testing 扭力扳手或相关仪器测试	Torque range: 扭力范围: 5~14NM

6 Weather Proof耐候性

	Property 项目	Test Conditions 试验条件	Standards 判定标准
6.1	Cold Proof 耐寒性	Inlet socket for testing being kept in the normal condition at $-20 \pm 2^{\circ}\text{C}$ for 96 hours, then to be measured within 1 hour after drops of water being taken away. -20±2℃放置 96 小时试验后, 置于常温常湿中 1 小时; 除去水滴后, 在一小时内测试之。	1.Max Contact Resistance: <u>50</u> mΩ 接触阻抗: <u>50</u> mΩ 以下 2.Clause 4.3shall be satisfied 必须满足 4.3 项 3.No abnormalities shall be observed on the appearance and construction.. 外观构造无异常现象。
6.2	Hot Proof 耐热性	Inlet socket for testing being kept in the normal condition at $85 \pm 2^{\circ}\text{C}$ for 96 hours, then to be measured within 1 hour. 85±2℃放置 96 小时试验后, 置于常温常湿中 1 小时; 在一小时内测试之。	
6.3	Resistance to humidity 耐湿性	Inlet socket for testing being kept in the normal condition at $40 \pm 2^{\circ}\text{C}$, and 90~95%HR for 96 hours, then to be measured within 1 hour after drops of water being taken away. 40±2℃, 相对湿度 90~95%下, 放置 96 小时试验后, 置于常温常湿中 1 小时; 除去水滴后, 在一小时内测定之。	

