



中国·蓝波
LANBOO

蓝波大电流开关
Pioneer of High-Current Switches

CCC CE RoHS Intertek ISO9001 多项专利

16A-M11 规格书

金属急停开关



铝氧化蘑菇头



镀金插脚



专用接插件

型号说明/选型，写法举例：LB16A-M11Z/S/A(L)

对应编号	LB	●●	●	—	●	●●	●	●	/	●	/	L
	1	2	3		4	5	6	7		8		9
1	LB	LANBOO 蓝波代码										
2	安装孔径	16mm										
3	系列号	A—常规系列										
4	头部形状	M—蘑菇头										
5	开关组合	11—1NO1NC 1常开1常闭触点，快动单触点										
6	动作形式	Z—自锁式（保持式），F—自复式（点动式）										
7	外壳材质	N—铜镀铬、S—不锈钢										
8	头部材质	A—铝氧化，可定制；S—不锈钢										
9	(L)	内部代码										

性能参数

开孔直径	对应孔径+0.2mm，例如：LB16A为16.2mm
外壳	H57/59铜镀铬、304不锈钢（RoHS）
按键	6063铝氧化（RoHS），可定制：304不锈钢（RoHS）
螺母	H57/59铜镀镍，可定制：304不锈钢（RoHS）
O型圈	硅胶（RoHS）
触点	银氧化锡AgSnO2（RoHS）



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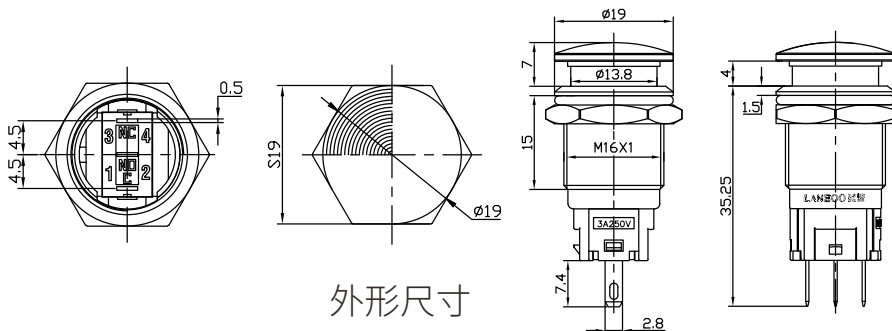
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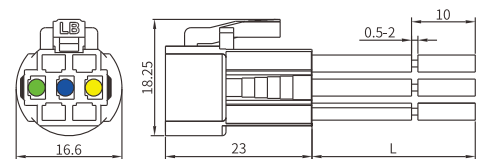
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底座	PA66 (RoHS), V0级阻燃	
引脚	H65镀金 (RoHS)	
安装面板厚度	≤12mm	
拧紧力矩	0.8-1.2N.m	
螺纹验证	将螺母锁紧至垫圈明显变形, 然后拆下, 如此循环 5 次, 无异常	
动作行程	总行程: 3.15±0.2mm, 接通过程: 1.8±0.2mm	
按压力	4±0.5N	
接线形式	引脚式, 可选配套接插件	
耐焊性	≤380°C (25~50W 电烙铁), ≤2 秒	
插片可焊性试验	各引脚分别焊接1mm ² 电线, 50N正向拉力后, 无脱落	
与线束的配合试验	150mm线长, ≤50mΩ, 拉开力: 20~35N (卡扣松开情况下)	
引脚反向推力	≥50N 无位移, 1min	
头部/底座防脱拉力	≥200N, 1min	
工作环境温度	-40°C~+80°C, 非真空状态、不结冰情况下	
工作环境湿度	45~90%RH	
贮存环境温度	包装完好情况下, -40°C~+55°C	
贮存环境湿度	包装完好情况下, 45~90%RH	
防护等级	防水IP65 (可定制IP67), 防撞IK10 (参考GB/T 20138)	
约定发热电流	I _{th} : 5A, 250VAC	
电阻性负载	AC-15: 110V: 1A, 220V: 0.5A	DC-13: 12V/24V: 1A
电感性负载	AC-15: 110V/220V: 0.2A	DC-13: 110V: 0.2A
接触电阻	≤50mΩ	
绝缘电阻	≥1000MΩ	
抗电强度(工频耐压)	1500VAC, 50HZ, 1min	
触点最小适用负载	3V AC/DC, 5mA (参考值, 取决于环境与负载情况)	
耐振性	XYZ 三向, 60HZ, 振幅 2mm	
产品防跌落	头部竖直跌落 1 米, 3 次, 能正常工作	
包装跌落	600mm 高度连续跌落 4 次, 产品无损坏	
温升	按 GB/T14048.5 标准中 8.3.3.3 条款	
盐雾试验	72h, 3 个周期, (参考 GB/T 2423.18-2012)	
低温试验	-40°C, 96h, 接触电阻≤200mΩ、按压力变化值≤30%, LED 正常	
高温试验	80°C, 96h, 接触电阻≤200mΩ、按压力变化值≤30%, LED 正常	
高低温冲击试验 (含LED加速老化试验)	-40~+85°C, 85%RH, 40min/循环, 50个循环, 接触电阻≤200mΩ、按压力变化值≤30%, LED正常	
电气寿命	阻性负载AC220V/1A、DC24V/1A: 10万次, AC220V/3A、DC24V/3A: 5万次, AC220V/5A、DC24V/5A: 0.5万次, (参考GB/T14048.5)	
机械寿命	自锁: 30万次, 自复: 100万次, (参考GB/T14048.5)	
极限按压测试	在底部保持 5s 时间, 再松开, 4 次/min, 进行 2000 次试验	
ESD静电	人体模式: 2KV, 可定制 8KV	
产品认证	CCC CE RoHS (定制) REACH (定制)	
专利号	ZL201830025326.9	
质保	66 个月	



外形尺寸



使用0.5mm²电线, 线长150mm, 可定做其他规格线长

接插件



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16A-M11 Specification

Metal emergency stop switch



Aluminum oxide mushroom head



Gold plated pins



Special connector

Model Description/Selection, Example:LB16A-M11Z/S/A(L)

The Corresponding Number		LB	●●	●	—	●	●●	●	●	/	●	/	L
		1	2	3		4	5	6	7		8		9
1	LB	LANBOO											
2	Install Diameter	16mm											
3	Series No.	A - Regular series											
4	Head Shape	Mushroom head											
5	Switch Combination	11—1NO1NC											
6	Action Form	Latching,Momentary											
7	Shell Material	N - Copper chrome plating, S - Stainless steel											
8	Head Material	A -Aluminum Oxide, Customizable: S -Stainless steel											
9	(L)	Internal code											

The performance parameters

Hole Diameter	Corresponding aperture +0.2mm, for example: LB16A is 16.2mm
Shell	H57/59 Copper Chrome 304 stainless steel (RoHS)
Key	6063 Aluminum oxide (RoHS), customizable: 304 stainless steel (RoHS)
Nut	H57/59 Nickel copper plating, customizable: 304 stainless steel (RoHS)
O-Ring	Silica gel (RoHS)
Contact Material	AgSnO2 silver oxide (RoHS)



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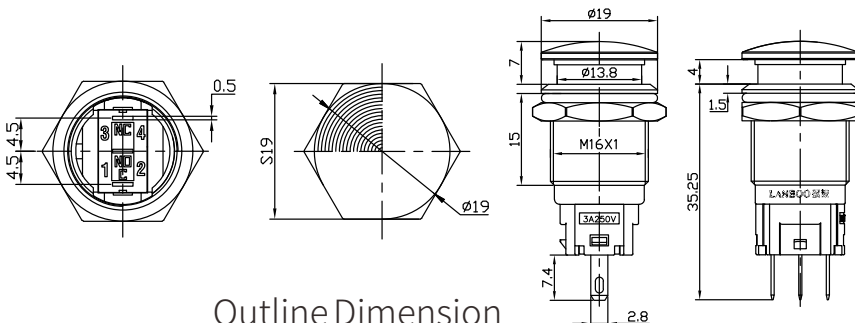
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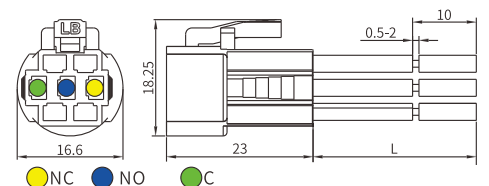
16A-M11 Specification

Metal emergency stop switch

Base Seat	PA66 (RoHS), Grade V0 flame Retardant	
Pins Material	H65 Gold Plating (RoHS)	
Mounting Panel Thickness	≤12mm	
Nut Tightening torque	0.8-1.2N.m	
Thread Verification	Lock the nut until the washer is visibly deformed, then remove the nut. Repeat 5 times no abnormalities	
Action Stroke	Total stroke: $3.15 \pm 0.2\text{mm}$, connecting stroke: $1.8 \pm 0.2\text{mm}$	
Operation Pressure	$4 \pm 0.5\text{N}$	
Connection Mode	Pins, Special connector can be selected	
Soldering Resistance	$\leq 380^\circ\text{C}$ (25~50W), ≤ 2 Seconds,	
Pins Welding Strength	Each pin is welded with 1mm^2 wire, 50N forward tension without falling off	
Matching test with wiring harness	Wires length 150 mm, $\leq 50\text{m}\Omega$, Pull force: 25 ~ 35N (When the buckle is loosened)	
Pin Reverse Thrust	$\geq 50\text{N}$	
Head Anti-off Strength	$\geq 200\text{N}$	
Working Environment Temperature	$-40^\circ\text{C} \sim +80^\circ\text{C}$, Non-vacuum, non-freeze	
Working Environment Humidity	45~90%RH	
Storage Ambient Temperature	Packing in good condition, $-40^\circ\text{C} \sim +55^\circ\text{C}$	
Storage Ambient Humidity	Packing in good condition, 45~90%RH	
Protection Level	IP65 (Customizable IP67), IK10 (Refer to GB/T 20138)	
Rated Thermal Current	Ith: 5A, 250VAC	
Resistive Load	AC-15: 110V: 1A, 220V: 0.5A	DC-13: 12V/24V: 1A
Inductive Load	DC-15: 110V/220V: 0.2A	DC-13: 110V: 0.2A
Contact Resistance	$\leq 50\text{m}\Omega$	
Insulation Resistance	$\geq 1000\text{M}\Omega$	
Dielectric Strength	1500VAC, 50HZ, 1min	
Min. Applicable Load For Contact	3V AC/DC, 5mA (Reference value, depending on the environment and load)	
Resistance To Vibration	XYZ, 60HZ, The amplitude 2mm	
Product Fall-Proof	Head vertical drop 1 meter, 3 times, can work normally	
Packaging Fall-Proof	600mm height continuous drop for 4 times, no damage to the product	
Temperature Rise	According to clause 8.3.3.3 in GB/T14048.5 standard	
Salt Spray Test	72H, 3 Cycles (Refer to GB/T 2423.18-2012)	
Low Temperature Test	-40°C , 96h, Contact Resistance $\leq 200\text{m}\Omega$, Change in pressure $\leq 30\%$, LED Normal	
High Temperature Test	80°C , 96h, Contact Resistance $\leq 200\text{m}\Omega$, Change in pressure $\leq 30\%$, LED Normal	
High And Low Temperature Impact Test	$-40 \sim +85^\circ\text{C}$, 85%RH, 40min/Circulation, 50 Circulation, Contact Resistance $\leq 200\text{m}\Omega$, Change in Pressure $\leq 30\%$, LED Normal	
Electrical Life	Resistance load AC220V/1A, DC24V/1A: 100,000 times, AC220V/3A, DC24V/3A: 50,000 times, AC220V/5A, DC24V/5A: 5,000 times, (Refer to GB/T14048.5)	
Mechanical Life	Latching: 300,000 times, Momentary: 1 million times, (Refer to GB/T14048.5)	
Limit Press Test	Keep 5s at the bottom, Release again, 4 times /min, Conduct 2000 Tests	
ESD Electrostatic	Body mode: 2KV, Customizable 8KV	
Certificate	CCC CE RoHS REACH	
Patent No.	ZL201830025326.9	
Quality Assurance	66 Months	



Outline Dimension



Connector: Cable length: 150mm, 0.5mm², Other lengths can be customized

Connector