



中国·蓝波
LANBOO

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

CCC CE ENEC Intertek ISO9001 多项专利

LB12B/16E 规格书

短款金属按钮开关



小巧精致 可配专用插件

球头/平头-1NO

头部及外壳可做氧化彩色

发光柔和高亮 长寿命LED

型号说明/选型，写法举例：LB12B-Q10Z/EB5-24V/N(L)

对应编号	LB	●●	●	—	●	●●	●	/	●	●	●●	/	●	L
	1	2	3		4	5	6		7	8	9		10	11
1	LB	LANBOO 蓝波代码												
2	安装孔径	12、16mm												
3	系列号	B—12B, E—16E。小型短款自锁复位系列												
4	头部形状	P—平头、Q—球头、G—高头，平头环形为定制												
5	开关组合	10—1NO 常开触点，慢动双触点												
6	动作形式	Z—自锁式（保持式），F—自复式（点动式）												
7	发光形状	E—环形，DY—电源符号，定制：D—单点（中心灯）												
8	发光颜色	R—红色、G—绿色、B—蓝色，定制：Y—黄色、W—白色												
9	LED 电压	5-24V、220V（外接电阻），定制：3V、25-48V 与 110V（外接电阻），AC/DC 通用												
10	外壳材质	N—铜镀铬，可定制：S—不锈钢、A—铝氧化、ST—不锈钢镀钛												
11	(L)	内部代码												

性能参数

开孔直径	对应孔径+0.2mm，例如：LB12B 为 12.2mm
外壳	H57/59 铜镀铬，可定制：304 不锈钢 (RoHS)、6063 铝氧化 (RoHS)
按键	316 不锈钢 (RoHS)，可定制：6063 铝氧化 (RoHS)
透光材料	PC (RoHS)，V2 级阻燃
螺母	H57/59 铜镀镍，可定制：304 不锈钢 (RoHS)
O型圈	硅胶 (RoHS)
触点	紫铜镀金/银 (RoHS)



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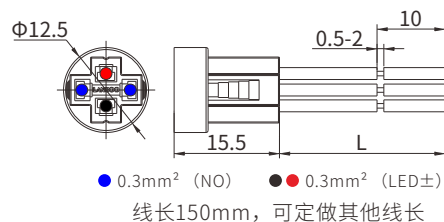
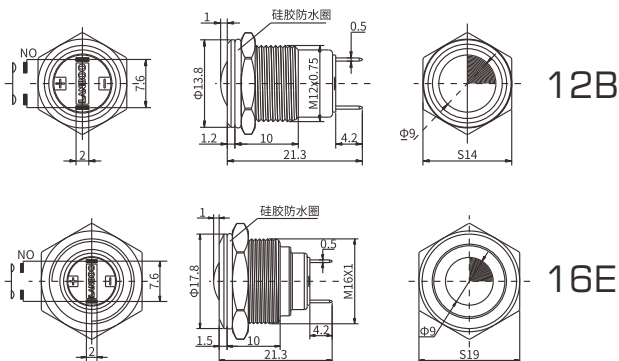
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底座	PA66 (RoHS), V0 级阻燃
引脚	H65 镀银 (RoHS)
安装面板厚度	≤8mm
拧紧力矩	0.8-1.2N.m
螺纹验证	将螺母锁紧至垫圈明显变形, 然后拆下, 如此循环 5 次, 无异常
动作行程	总行程: 2.8±0.2mm, 接通过程: 0.85±0.15mm
按压力	4±0.5N
接线形式	引脚式, 可选配套接插件
耐焊性	≤380°C (25~50W 电烙铁), ≤2 秒
插片可焊性试验	各引脚分别焊接 1mm ² 电线, 30N 正向拉力后, 无脱落
与线束的配合试验	150mm 线长, ≤50mΩ, LED 灯通电无闪烁, 拉开力: 无灯 25~40N, 带灯 40~60N
引脚反向推力	≥50N 无位移, 1min
头部防脱顶牛	≥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, 防撞 IK08 (参考 GB/T 20138)
约定发热电流	I _{th} : 3A, 250VAC
电阻性负载	AC-12: 110V:1A, 220V:0.5A DC-13: 12V/24V:2A
电感性负载	AC-12: 110V/220V:0.3A 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 灯加速老化试验)	-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/0.5A、DC24V/2A: 1 万次, (参考 GB/T14048.5)
机械寿命	自锁: 20 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
LED 额定电流	≤24V, ≤20mA; >24V, ≤10mA
LED 灯珠类型	贴片无极双芯片 LED
LED 降压方式	5-24V 内置微型降压电阻, >24V 外接电阻
LED 寿命	≥50000h (参考值)
产品认证	CCC CE RoHS (定制) REACH (定制)
专利号	ZL201730146781.X、ZL201621035293.8
质保	66 个月





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H57/59铜镀铬,可定制不锈钢及铝氧化色外壳

H57/59 Copper Chrome plating, can be customized stainless steel and aluminum oxide color

硅胶密封圈

Silicone seal ring

H57铜镀镍六角螺母

Hexagon nut in nickel plating

304不锈钢拉伸按键

304 Stainless steel stretch button

PC(V2阻燃)

V2 Flame Retardant

弹簧/spring

硅胶密封防水圈

Silicone Seal Ring

镀银静触点

Silvering static contact

桃心,自锁机构

Latching Mechanism

PA66+GF20 (V0)

镀金/银动触点

Gold/silver plated contacts Moving Contact

H65-Y镀银插脚

H65-Y Silver-plated pin

Pc衬套

Bushing

锁钩

Locking Hook

无极贴片灯珠

Non-polar LED

PBT+GF20 (V0)

0.3mm²国标铜芯线

National Standard Copper core wire



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LB12B/16E Specification

Short metal push button switch



Total length
21.3mm



Small and beautiful



Momentary/Latching-1NO



Soft and bright long-life LED

Model Description/Selection, Example:LB12B-Q10Z/EB5-24V/N(L)

The Corresponding Number		LB	●●	●	—	●	●●	●	/	●	●	●●	/	●	L
		1	2	3		4	5	6		7	8	9		10	11
1	LB	LANBOO													
2	Install Diameter	12、16mm													
3	Series No.	B - 12 B, E - 16 E.Small short self - locking reset series													
4	Head Shape	P - flat head, Q - ball head, G - high head, flat head ring is customized													
5	Switch Combination	10 -- 1NO normally open contact, slow-moving double contact													
6	Action Form	Latching, Momentary													
7	Luminous Shape	E -Ring, DY -Power symbol, custom: D -Single point (center light)													
8	LED Color	R -Red, G -Green, B -Blue, custom: Y -Yellow, W -White													
9	LED Voltage	5-24V, 220V (external resistance), customized: 3V, 25-48V and 110V (external resistance), AC/DC universal													
10	Shell Material	N -Copper chrome plating, customizable: S -Stainless steel, A -Aluminum oxide, ST -Stainless steel titanium plating													
11	(L)	Internal code													

The performance parameters

Hole Diameter	Corresponding aperture +0.2mm, for example: LB12B is 12.2mm
Shell	H57/59 Copper chrome, customizable: 304 stainless steel (RoHS), 6063 Aluminum oxide (RoHS)
Key	316 stainless steel (RoHS), customizable: 6063 Aluminum oxide (RoHS)
Pervious To Light Material	PC (RoHS), V2 flame retardant
Nut	H57/59 Nickel copper plating, customizable: 304 stainless steel (RoHS)
O-Ring	Silica gel (RoHS)
Contact Material	Copper plated/Silver (RoHS)



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LB12B/16E Specification
Short metal push button switch

Base Seat	PA66 (RoHS), Grade V0 flame retardant	
Pins Material	H65 Silver Plating (RoHS)	
Mounting Panel Thickness	≤8mm	
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 without exception	
Action Stroke	Total stroke: 2.8±0.2mm, connecting stroke: 0.85±0.15mm	
Operation Pressure	About 4±0.5N	
Connection Mode	Pins, Special connector can be selected	
Soldering Resistance	≤380°C (25~50W), ≤2 Seconds,	
Pins Welding Strength	Each pin is welded with 1mm ² wire, 30N forward tension without falling off	
Matching test with wiring harness	Wires length 150 mm, ≤ 50mΩ, Power on, LED flicker free, Pull force: Without LED 25 ~ 40N, With LED 40 ~ 60N	
Pin Reverse Thrust	≥50N	
Head Anti-off Strength	≥200N	
Working Environment Temperature	-40°C~+80°C, Non-vacuum, non-freeze	
Working Environment Humidity	45~90%RH	
Storage Ambient Temperature	Packing in good condition, -40°C~+55°C	
Storage Ambient Humidity	Packing in good condition, 45~90%RH	
Protection Level	IP65, IK08 (GB/T 20138)	
Rated thermal current	Ith: 3A, 250VAC	
Resistive Load	AC-12: 110V:1A, 220V:0.5A	DC-13: 12V/24V:2A
Inductive Load	AC-12: 110V/220V:0.3A	DC-13: 110V:0.2A
Contact Resistance	≤50mΩ	
Insulation Resistance	≥1000MΩ	
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	48h, 2 cycles, (refer to GB/T 2423.18-2012)	
Low Temperature Test	-40°C, 96h, Contact resistance≤200mΩ, Change in pressure≤30%, LED Normal	
High Temperature Test	80°C, 96h, Contact resistance≤200mΩ, Change in pressure≤30%, LED Normal	
High And Low Temperature Impact Test	-40~+85°C, 85%RH, 40min/Circulation, 50 Circulation, Contact resistance≤200mΩ, Change in pressure≤30% LED Normal	
Electrical Life	Resistive load AC220V/0.5A, DC24V/2A: 10,000 times (refer to GB/T14048.5)	
Mechanical Life	Latching: 200,000times, Momentary: 1000000 times, (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	
LED Rated Current	≤24V, ≤20mA; >24V, ≤10mA	
LED Type	Patch nonpolar double core LED	
LED Resistance	5-24V Built-in Resistance, >24V An External Resistor	
LED Life	≥50000h (Reference)	
Certificate	CCC CE RoHS REACH	
Patent No.	ZL201730146781.X, ZL201621035293.8	
Quality Assurance	66 Months	

