



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

LB12-22QC 规格书
超薄轻触金属按钮

短款轻触金属按钮

Ultra-thin touch of metal buttons

0.2A/220VAC 24VDC

插脚款



小巧精致, 不锈钢外壳



螺丝脚接线



凹面大按键



防滑螺母

型号说明/选型, 写法举例: LB16QC-P10F/E+DYR5-24V/S/(L)

对应编号		LB	●●	QC	—	●	●●	F	/	●	●	●●	/	●	/	L	
		1	2	3		4	5	6		7	8	9		10		11	
1	LB	LANBOO 蓝波代码															
2	安装孔径	12mm、16mm、19mm、22mm															
3	系列号	QC—微行程、超薄, 轻触系列															
4	头部形状	P—平头															
5	开关组合	10—1NO常开触点, 快动触点															
6	动作形式	F—自复式(点动式)															
7	发光形状	E—环形, 定制: E+DY—环形+电源符号															
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, 定制: 36V、48V、110V, AC/DC 通用															
10	外壳材质	S—不锈钢, 可定制: N—铜镀铬、A—铝氧化															
11		内部代码															

性能参数

开孔直径	对应孔径+0.2mm, 例如: LB16QC为16.2mm
外壳	304不锈钢 (RoHS), 可定制: H57/59铜镀铬、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铜镀铬, 可定制: 304不锈钢 (RoHS)



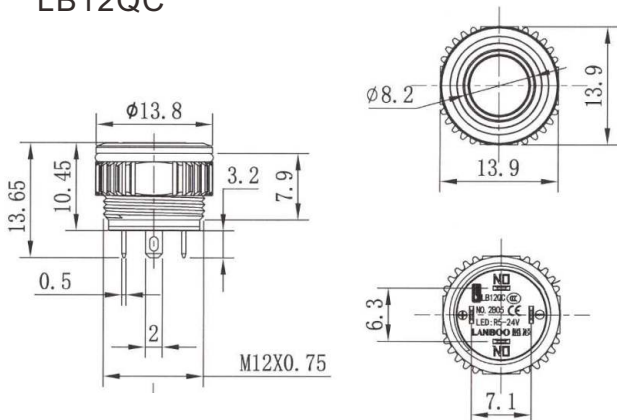
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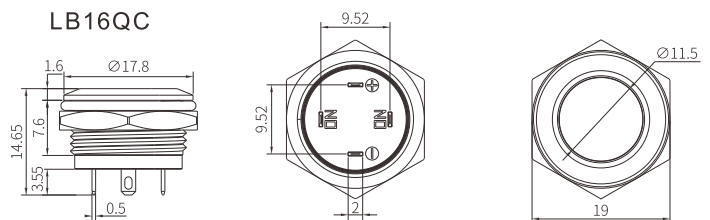
LB12-22QC 规格书
超薄轻触金属按钮

O型圈	NBR, 可定制: 硅胶 (RoHS)
触点	不锈钢镀镍 (RoHS)
底座	PBT (RoHS), 粉黄色, V0级阻燃
引脚	H59镀银 (RoHS)
安装面板厚度	≤4mm
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: 0.9±0.1mm, 接通过程: 0.5±0.1mm, 微行程
按压力	3.5±0.8N
接线形式	接线柱, 国标0.3mm²导线
耐焊性	≤380°C(25~50W 电烙铁) ≤2 秒
引脚反向推力	≥80N 无位移, 1min
头部防脱顶牛	≥180N, 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IK08 (参考GB/T 20138)
约定发热电流	Ith: 0.5A, 250VAC
电阻性负载	AC-12: 220V/0.2A; DC-13: 12V/24V/0.2A
接触电阻	≤50mΩ
绝缘电阻	≥1000MΩ
抗电强度(工频耐压)	1500VAC, 50HZ, 1min(开关脚与外壳); 500VAC, 50HZ, 1min(开关脚与LED灯脚)
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
耐冲击试验	各部位能承受冲击力10g, 能正常工作
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, 电阻≤200mΩ 压力变化值≤30%, LED
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/0.2A、DC24V/0.2A: 1 万次, (参考 GB/T14048.5)
机械寿命	10 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, 16QC、19QC 可定制 8KV
LED 额定电流	≤24V, ≤15mA, >24V, ≤8mA
LED 灯珠类型	贴片有极 LED
LED 降压方式	内置降压贴片电阻
LED 寿命	≥50000h
产品认证	CCC、CE、RoHS
专利号	202030180957.5
质保	66 个月

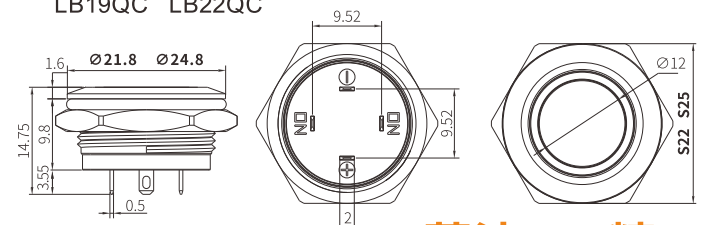
LB12QC



LB16QC



LB19QC LB22QC





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LB12-22QC 规格书

超薄轻触金属按钮

均为316不锈钢车削按键
有平头环形、平头环形+电源符号
316 Stainless steel stretch button

PC(V2阻燃)
V2 Flame Retardant

硅胶O型圈,ROHS、不易开裂
Silicone seal ring

不锈钢外壳,可定制镀铬或氧化色
304 stainless steel

两组无极灯珠
寿命高达50000小时
Non-polar LED/50000Hours

底座材料为PBT+GF20
V0 Flame Retardant

高寿命轻触开关,1NO
Long life,tact switch

H59镀银 Silver plating (RoHS)



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LB12-22QC Specification
Ultra thin tact metal button

Tact Switch

Ultra-thin touch of metal buttons
0.2A/220VAC 24VDC



Short,304



Sliver pins



50000HOURS LED



Waterproof

Model Description/Selection, Example: LB12QC-P10F/E+DYR5-24V/S/J(L)

The Corresponding Number		LB	●●	QC	—	●	●●	F	/	●	●	●●	/	●	/	L	
		1	2	3		4	5	6		7	8	9		10		11	
1	LB	LANBOO															
2	Install Diameter	12mm、16mm、19mm、22mm															
3	Series No.	QC - micro stroke, ultra thin, light touch series															
4	Head Shape	P—Flat head															
5	Switch Combination	10—1NO Normally open contact, quick moving contact															
6	Action Form	F-Momentary															
7	Luminous Shape	E—Ring, Customization: E+DY - Ring + Power symbol															
8	LED Color	R -Red, G -Green, B -Blue,Custom: Y -Yellow, W -White															
9	LED Voltage	5-24V, 220V, Customized :36V、48V、110V, AC/DC General															
10	Shell Material	S—Stainless steel, Customizable: N—Copper chrome plating, A—Aluminum Oxidation															
11	L	Internal code															

The performance parameters

Hole Diameter	Corresponding aperture +0.2mm, for example: LB16QC is 16.2mm
Shell	304 Stainless steel (RoHS), customizable: H57/59 Nickel copper plating, 6063 aluminum oxidation (RoHS)
Key	316 stainless steel (RoHS), customizable: 6063 Aluminum oxide (RoHS)
Pervious To Light Material	PC (RoHS), V2 flame retardant
Nut	H57/59 Copper Chrome plating, Customizable:304 Stainless steel(RoHS)



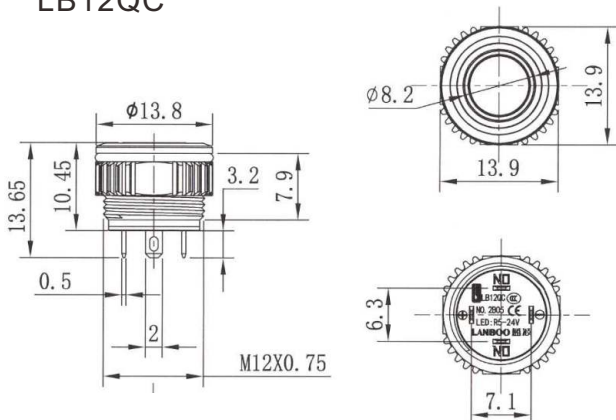
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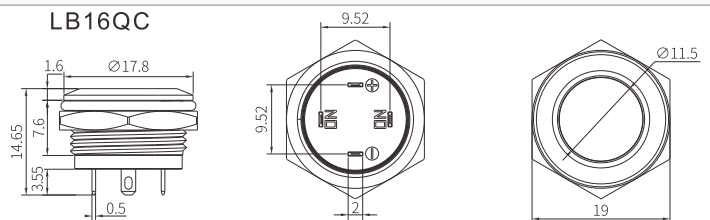
LB12-22QC Specification
Ultra thin tact metal button

O-Ring	NBR, customizable: Silica gel (RoHS)
Contact Material	Nickel plating on stainless steel(RoHS)
Base Seat	PBT (RoHS), Grade V0 flame Retardant
Pins Material	H59 Silver Plating (RoHS)
Mounting Panel Thickness	≤4mm
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: 0.9±0.1mm, connect stroke: 0.5±0.1mm, micro stroke
Operation Pressure	3.5±0.8N
Connection Mode	Wiring terminal, GB0.3mm ² wiring
Soldering Resistance	≤380°C (25~50W), ≤2 Seconds,
Pin Reverse Thrust	≥80N, 1min
Head Anti-off Strength	≥180N, 1min
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, customizable IP67, IK08 (GB/T 20138)
Rated thermal current	I _{th} : 0.5A, 250VAC
Resistive Load	AC-12: 220V:0.2A; DC-13: 12V/24V:0.2A
Contact Resistance	≤50mΩ
Insulation Resistance	≥1000MΩ
Dielectric Strength	1500VAC, 50HZ, 1min(pins and shell); 500VAC, 50HZ, 1min(pins and LED)
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
Impact Test	Each part can withstand impact force 10g, Work normally
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≤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 DC24V/ 0.2A: 10,000 times (Refer to GB/T14048.5)
Mechanical Life	100,000 times (Refer to GB/T14048.5)
Limit Press Test	Keep 5s at the bottom, release again, 4 times /min, conduct 2000 tests
ESD Electrostatic	Human body mode: 2KV, 16QC, 19QC can be Customized 8KV
LED Rated Current	≤24V, ≤15mA; >24V, ≤8mA
LED Type	The patch has LED poles
LED Resistance	Built-in Resistance
LED Life	≥50000h (Reference)
Certificate	CCC, CE, RoHS
Patent No.	202030180957.5
Quality Assurance	66 Months

LB12QC



LB16QC



LB19QC LB22QC

