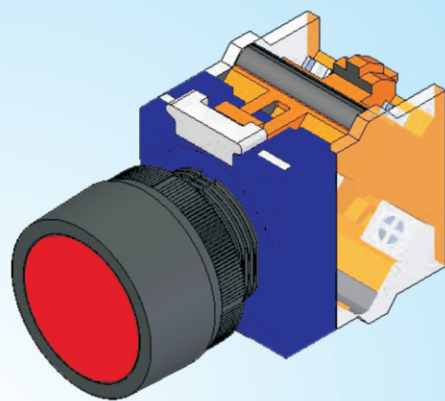


LAY39-φ22系列按钮开关

LAY39-φ22 Series Button Switch

——控制电器产品名录 2014

安全 智能 灵动



CE UL CCC TÜV CB RoHS
ISO9001 ISO14001 OHSAS18001

用途 APPLICATION

LAY39-φ22系列按钮开关，适用于交流50Hz（或60Hz）、电压至660V及直流电压至440V的数控机床、船舶、纺织、印刷、电力等设备的控制电路中，作控制、信号、联锁等使用。

LAY39-φ22 series button switch, adapt in AC 50Hz(or 60Hz)、voltage is up to 660V and DC voltage is up to 440V, used for control、signals、reverse function in CNC machine tools、shipbuilding、textiles、printing、electrical and other equipments control circuit.

执行标准 Implementation of standards:

GB 14048.1-2006 低压开关设备和控制设备 第1部分：总则

Low-voltage switchgear and control equipment Part 1: General Provisions

GB 14048.5-2008 低压开关设备和控制设备 第5-1部分：控制电路电器和开关元件机电式控制电路电器

Low-voltage switchgear and control equipment Part 5-1: Control circuit devices and

Switching component – Electromechanical control circuit devices

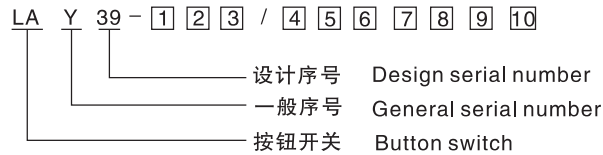
结构型式和型号含义 STRUCTURE TYPE AND MEANS

■ 结构型式 structure type

△ 按钮开关为积木式结构，触头为双断点瞬时型，螺母安装。其结构由操动器、基座、触头系统组成。

Button Switch is modular structure, the contact is instantaneous type double breakpoints, installed by screw. Its structure parade by operate device、base board、contact system

■ 型号及其含义 type and means



△ 1 表示常开触头数 instate normally open contact

△ 2 表示常闭触头数 instate normally contact volume

△ 3 表示派生代号（见表1、2） instate relative code(as table 1、2)

表(Table)1

代号 Code name	含义 means	代号 Code name	含义 means
	一般按钮 General button	X	旋钮 Role button
※	一般符号按钮 General symbol buttons	XB	旋柄钮 Rotary button
D	带灯钮 with light button	XD	带灯旋钮 With light knob
Z	自锁按钮 Self lock button	XF	自复位旋钮 Self reset role button
ZD	自锁带灯钮 Self-locking with light button	XBF	自复位旋柄钮 Self reset rotary button
P	平钮 Level button	Y	钥匙钮 Key button
PD	平钮带灯钮 Flat button with light button	SW	双位按钮 Double-button
ZP	自锁式平钮 Self lock level button	M	蘑菇钮 Mushroom button
ZPD	自锁式平钮带灯钮 Self-locking type flat button with light button	ZM	自锁式蘑菇钮 Self lock mushroom button
MJ	蘑菇急停钮 Mushroom rush button	MJL	拉拔式按钮 Drawing-button

表(Table)2

代号 Code name	含义 means	代号 Code name	含义 means
XDA	信号灯 Signal light	SD	双色信号灯 Two-tone signal light
XDB	信号灯 Signal light	M	蜂鸣器 Buzzer
XDB/k	抗干扰型信号灯 Anti-interference type signal light	SM	闪光蜂鸣器 Flash buzzer

△ 一般式符号钮的符号在GB3167-93中的序号如下表：

General symbol button serial number in the GB3167-93 as following table

序号 No.	1.1	1.8	2.44	2.45	2.46	2.47
符号 sign						
含义 mean	直线运动 Sharp motion	转动 Turn round	泵 Pump	冷却泵 Cool pump	液压泵 Pressure pump	润滑泵 Lubricate pump
序号 No.	3.11	3.12	3.13	3.14	3.5	3.6
符号 sign						
含义 mean	起动 start	停止 stop	起动与停止 start and stop	点动 Point	自动循环 Automatic cycle	半自动循环 Semi-automatic cycle

△ 4表示钮面颜色(见表3) 4 means Instate button surface color (as table 3)

表(Table)3

代号 Code name	R	G	Y	B	W	K
按钮面含义 Button side meaning	红 red	绿 green	黄 yellow	蓝 blue	白 white	黑 black
信号灯及灯钮面含义 Signal light and light button side meaning	红 red	绿 green	黄 yellow	蓝 blue	白 white	

△ 5表示旋钮、钥匙钮动作位置及钥匙拔出位置 (见表4、5)

5 means Instate rotary、key button act place and key drawing place(as table 4、5)

旋钮动作位置及自动复位旋钮复位位置The knob action position and automatically reset knob to reset position

表(Table)4

2	3	f	fu	ffu	zffu	ffuz
二位置 two place	三位置 three place	左边自复 Left self-reset	右边自复 Right self-reset	左右自复 Left and right self-reset	左锁定右自复 Left lock and right self-reset	右锁定左自复 Right lock and left self-reset

钥匙钮动作位置及钥匙拔出位置Key button action position and the key is removed position

表(Table)5

2	3	o	a	ao	au
二位置 two place	三位置 three place	所有位拔出 Drawing all place	左边可拔出 Drawing left side	中间可拔出 Drawing middle	右边可拔出 Drawing right side

△ 6表示带灯钮、信号灯、蜂鸣器规格，见（表6）

6 Means with light button、signal light、buzzer specifications see (table 6)

△ 7表示电压规格，见（表6） 7 Means voltage specification see (table 6)

表(Table)6

光源 light power	LED（发光二极管） High bright							
代码 code	1	2	3	4	5	6	7	8
电源 power	AC、DC					AC、DC或AC/DC		AC
电压 voltage	6	12	24	36	48	110	220	380

- △ 8 表示湿热型字母为TH 8 Means damp-hot type letters to TH
- △ 9表示塑料帽、金属帽 9 means Instate plastic caps 、metal caps

表(Table)7

类型 type	S	J
含义 means	塑料帽 Plastic caps	金属帽 Metal caps

- △ 10表示按钮的A型和B型 10 means Instate A type and B type button
- A型按钮：触头为双断点，触板为挠板式，动作形式为瞬动型。
A type button: double breaking contact, scratch plate type touch panel, instant act type.
- B型按钮：触头为双断点，触板为直板式，动作形式为直动型或慢动型，承载电流比A类按钮大。
B type button: double breaking contact, direct plate type touch panel, direct-dynamic or slow-dynamic type action, load current larger than A type button

工作条件 WORK CONDITION

- △ 周围空气温度-25℃ ~ +60℃； Ambient temperature: -25℃ ~ +60℃；
- △ 安装地点海拔不超过3000m； Elevation≤3000m；
- △ 最高温度为+40℃时，空气的相对湿度为不超过85%，对由于温度变化偶尔产生的凝露应采取特殊的措施；
Relative humidity is not exceeding 85% at the maximum ambient temperature +40℃. Should give consideration to the dews, which would appear due to temperature change；
- △ 污染等级为：“污染等级3”； Pollution grade: Grade 3；
- △ 安装类别为：“安装类别II”； Installation categories: class II；
- △ 振动条件：应安装在无显著摇动、冲击和振动的地方；
Vibration condition: Button switch should be installed at the place without significantly shaken, shock and vibration.
- △ 板前防护等级IP40，一般按钮类加密封垫后，防护等级可达IP65。
Protection grade before board is IP40, general button type after add gasket, protection grade can reach IP65.

技术参数(表8) TECHNICAL PARAMETERS

表(Table)8

额定绝缘电压Ui Rated insulation voltage		AC 690V或DC 440V				
工频耐受电压 Frequency tolerance voltage		2000V 50Hz 1min				
AC-15	额定工作电压Ue (V) Rated operational voltage	660	380	220	110	48
	额定工作电流Ie (A) Rated operational current	1.5	2.5	4.5	6	8
DC-13	额定工作电压Ue (V) Rated operational voltage	440	220	110	48	24
	额定工作电流Ie (A) Rated operational current	0.1	0.3	0.6	1.3	2.5
约定发热电流Ith A Conventional thermal current		10A				
寿命 life		机械寿命 (次) Machine life span			电寿命 (次) Electrical life span	
	一般式、蘑菇式 General、mushroom type	300 × 10 ⁴			30 × 10 ⁴	
	带灯式按钮 With light button	100 × 10 ⁴			10 × 10 ⁴	
	旋钮式、自锁式、钥匙式 Rotary、Self-lock type、key type	5 × 10 ⁴			5 × 10 ⁴	
	信号灯、蜂鸣器 Signal light、Buzzer				大约3 × 10 ⁴ 小时 about 3 × 10 ⁴ hour	

带灯式按钮开关、信号灯、蜂鸣器参数见表9

表(Table)9

额定绝缘电压Ui (V) Nominal insulation voltage Ui (V)	AC 60V DC 60V	AC 380V	DC 220V
额定工作电压Ue(V) Rated operational voltage	AC/DC 6V、12V、24V、36V、48V	AC110V、220V、380V	DC 110V、DC 220V
	AC/DC110V、AC/DC 220V AC380V 抗干扰型信号灯门限电压为40V, 即40V以上信号灯可靠点亮 AC/DC110V、AC/DC 220V AC380V anti-interference type signal light threshold voltage is 40V, that means more than 40V signal light reliable lighten		
HYDZ(蜂鸣器) HYDZ (Buzzer) LED(发光二极管) LED (light-emitting diode)	工作电压6-8V 工作电流20mA Operating voltage 6-8V Operating current 20mA		

触点印字说明 CONTACT POINT INTRODUCTION

△ 按钮开关触点采用二位数字表示, 第一位1、2表示第一开关元件触点位置, 3、4表示第二开关元件触点位置, 第二位1、2表示常闭, 3、4表示常开。

Button switch contact point instate by two digits, the first digital 1、2 instate the first switch component contact point place, 3、4 instate the second switch component contact place, the second digital 1、2 instate normally closed, 3、4 instate normally open.

三位置钥匙、旋钮操动图 THREE POSITIONS KEY,KNOD EXERCISE PICTURE

表(Table)10

三位置操动图 (钥匙钮、旋钮) three positions operation picture(key button、rotary button)

型号 type	触头组合 Contact team	左旋45°或90°				中间0°				右旋45°或90°			
LAY39-11X/3	1NO+1NC	①	x	x	②	①	x	-	②	①	-	-	②
LAY39-02X/3	2NC	①	x	-	②	①	x	x	②	①	-	x	②
LAY39-20X/3	2NO	①	-	x	②	①	-	-	②	①	x	-	②
LAY39-12X/3	1NO+2NC	①	x	x	②	①	x	-	②	①	-	-	②
		③	x			③	x			③	-		
LAY39-21X/3	2NO+1NC	①	x	x	②	①	x	-	②	①	-	-	②
				x	③			-	③			-	③
LAY39-03X/3	3NC	①	x	-	②	①	x	x	②	①	-	x	②
		③	x			③	x			③	-		
LAY39-30X/3	3NO	①	-	x	②	①	-	-	②	①	x	-	②
				x	③			-	③			-	③
LAY39-13X/3	1NO+3NC	①	x	x	②	①	x	-	②	①	-	-	②
		③	x	-	④	③	x	x	④	③	-	x	④
LAY39-22X/3	2NO+2NC	①	x	x	②	①	x	-	②	①	-	-	②
		③	x	x	④	③	x	-	④	③	-	-	④
LAY39-31X/3	3NO+1NC	①	x	x	②	①	x	-	②	①	-	-	②
		③	-	x	④	③	-	-	④	③	x	-	④
LAY39-04X/3	4NC	①	x	-	②	①	x	x	②	①	-	x	②
		③	x	-	④	③	x	x	④	③	-	x	④
LAY39-40X/3	4NO	①	-	x	②	①	-	-	②	①	x	-	②
		③	-	x	④	③	-	-	④	③	x	-	④

△ x 表示触头闭合, - 表示触头开启, ① 表示第1组触头, ② 表示第2组触头, ③ 表示第3组触头, ④ 表示第4组触头

X means contact close, - means contact open, ① means group 1 contact, ② means group 2 contact, ③ means group 3 contact, ④ means group 4 contact

△ 注: 钥匙钮旋转角度为45°

Note: the key button rotation angle of 45 °

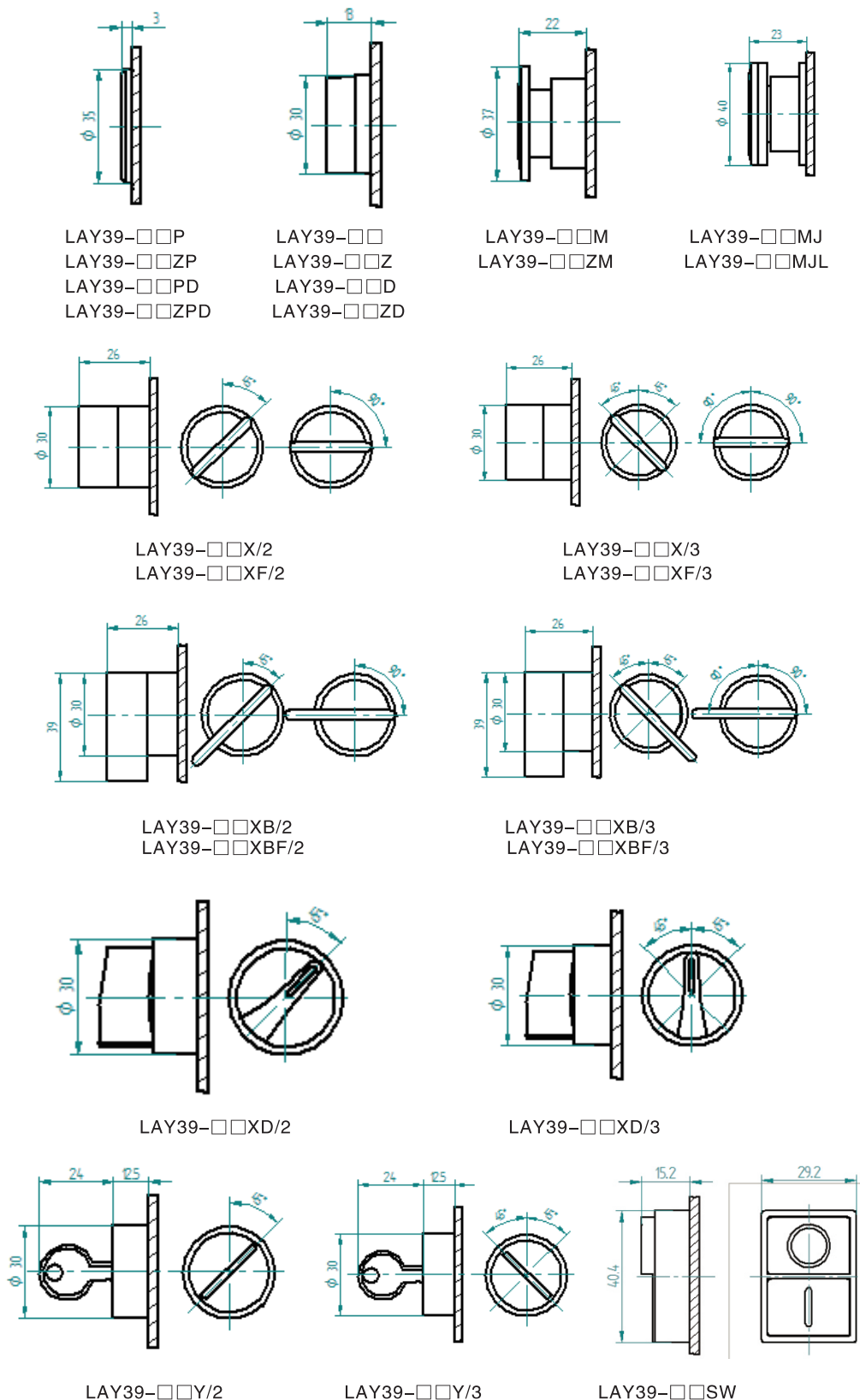
外形尺寸及安装尺寸 Overall dimension and installation dimension

△ 按钮开关外形尺寸 Button switch overall dimension

外形尺寸与安装面板开孔尺寸，中心线之间的最小距离按以下图：

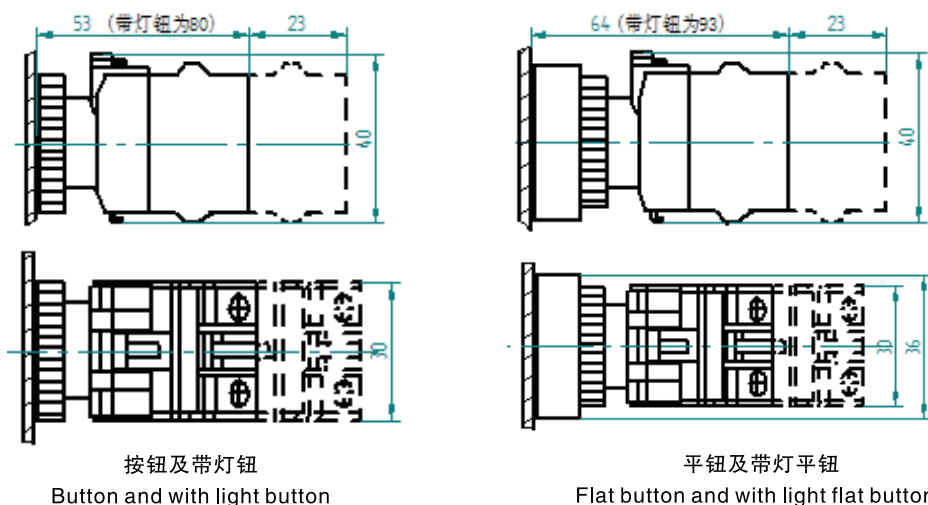
Overall dimension and install panel open pore size, minimum distance between mean line according to the following figure:

△ 1.1板前尺寸 size on the front of the board



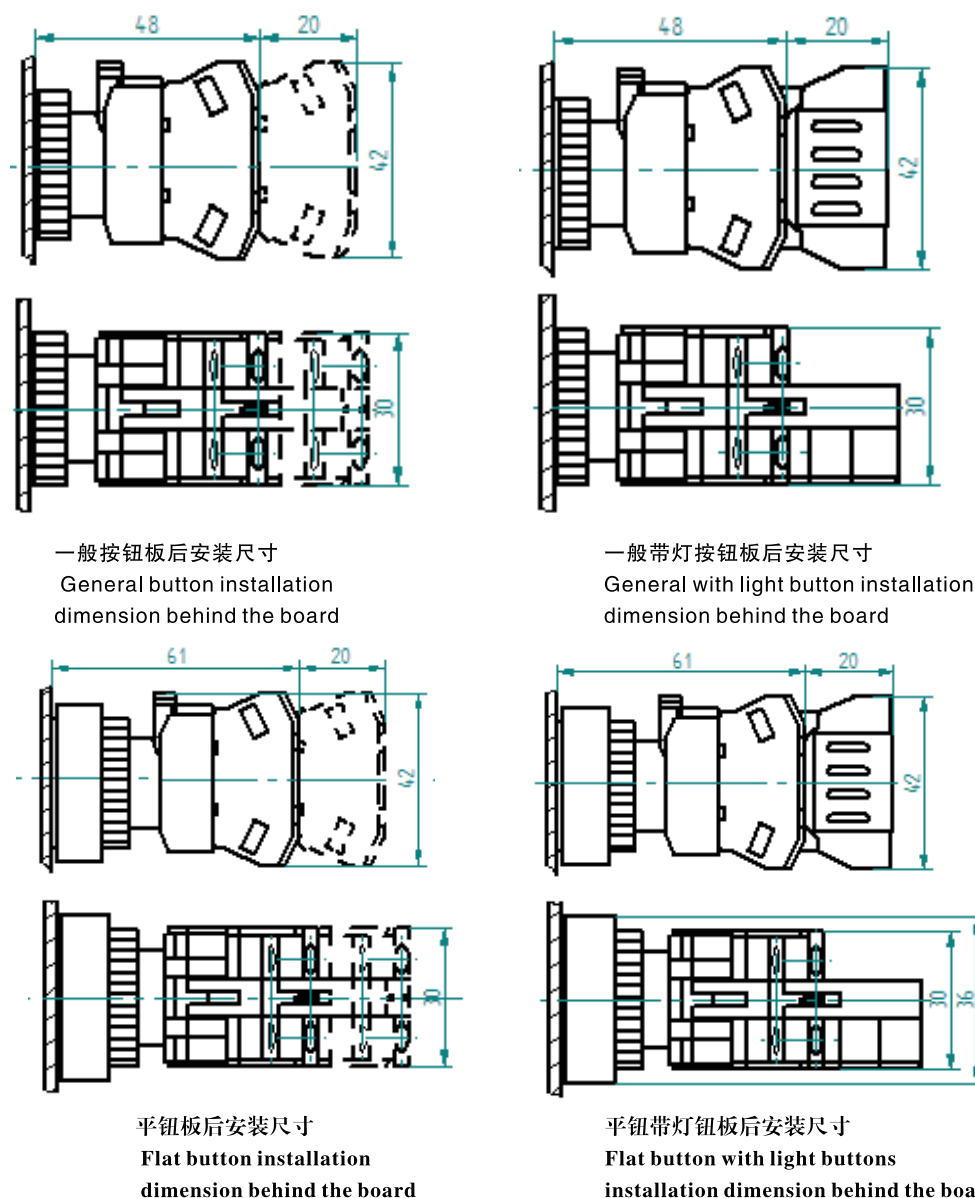
△ 1.2.A型按（平）钮及按（平）钮带灯钮板后安装尺寸

1.2. Type A press (flat) button and press (flat) button with light button installation dimension behind the board

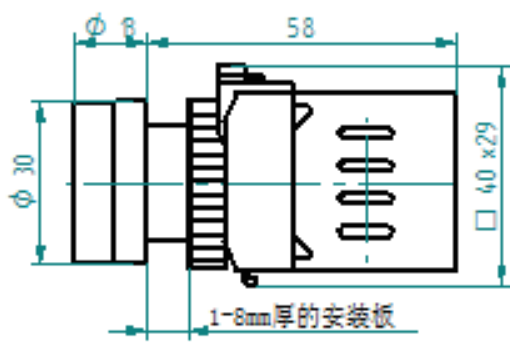


△ 1.3. B型按（平）钮及按（平）钮带灯钮板后安装尺寸

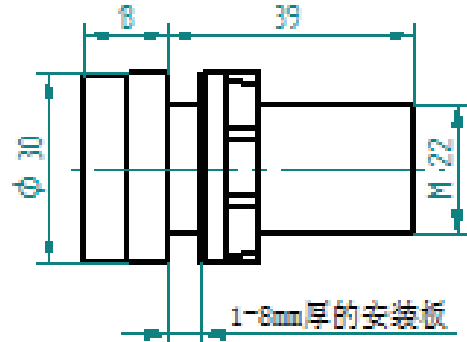
1.3. Type B press (flat) button and press (flat) button with light button installation dimension behind the board



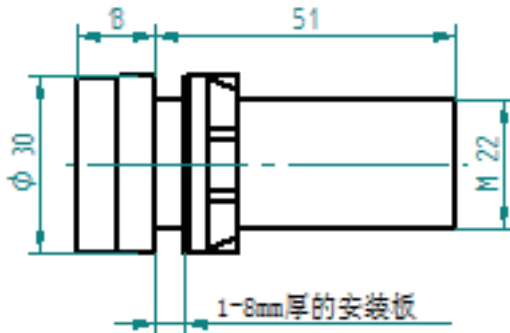
△ 1.4.信号灯及蜂鸣器外形尺寸 1.4. Signal light and buzzer overall dimension



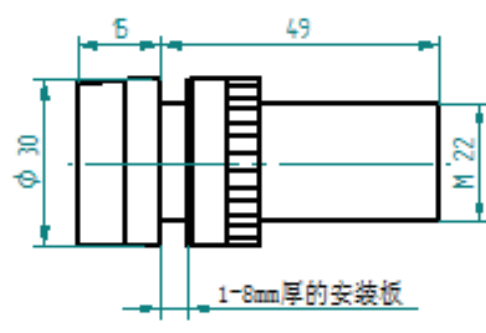
LAY39-XDA



LAY39-XDB

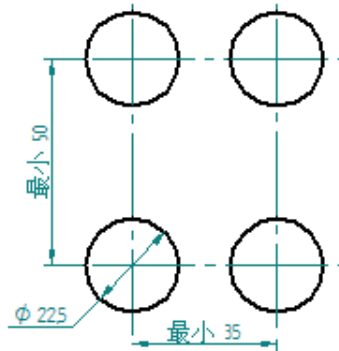


LAY39-SD

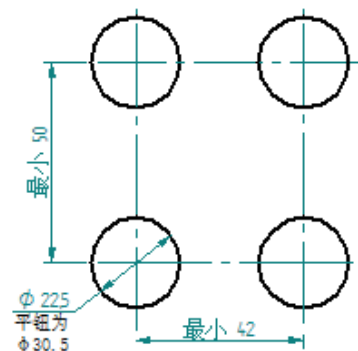


LAY39-M/SM

△ 1.5. 面板开孔尺寸及孔距尺寸 Panel open pore size and pitch size



一般及带灯钮、信号灯、
钥匙钮、旋钮
General and with light button,
signal light, key button, knob



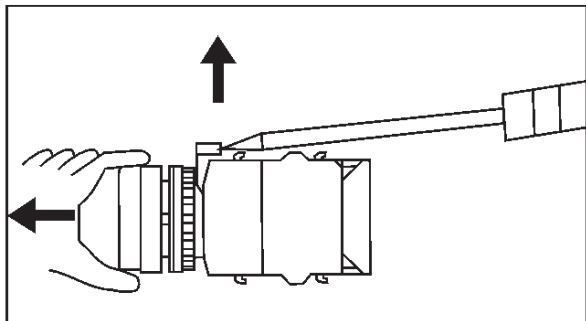
蘑菇按钮、长柄旋钮、平钮
Mushroom button, long
handle knob, flat button

△ 按钮开关安装板厚尺寸 Button switch mounting plate thickness:

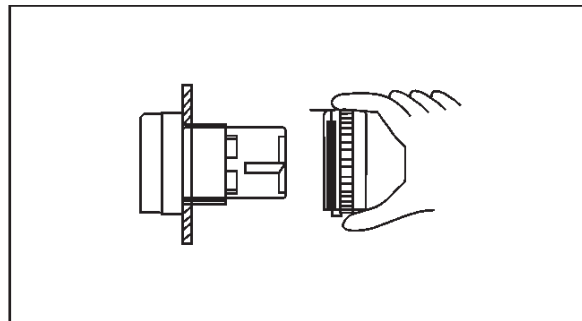
A型和B型按钮开关安装板厚尺寸为1-6mm

The A-type and B-type button switch mounting plate thickness of 1-6mm

拆卸方式 DEMOLITION WAY

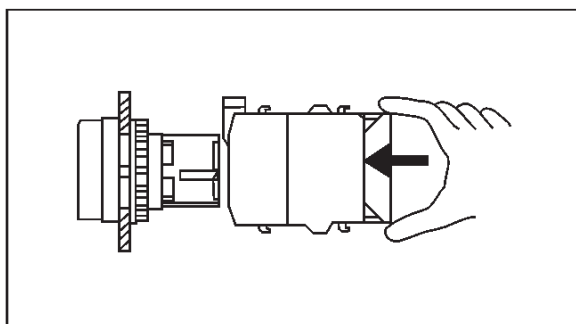


安装前,先撬起固定座上的锁片,从固定座上卸下操作件。
Before install, pop locking pieces on Mounts, then unload operation pieces from Mounts.

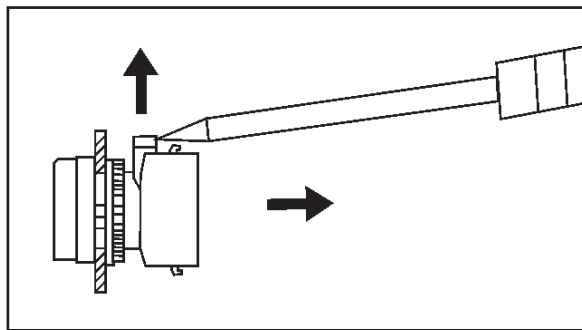


用于 $\Phi 22.5$ 的产品:将操作部件由板前插入安装孔内,于面板后旋上紧固圈.用于 $\Phi 30.5$ 的产品,将操作部件,由面板前插入安装孔内,于面板后套上转换环再旋上紧固圈。

For $\Phi 22.5$ products: insert operation components to installation hole from the front of the board, then rotary bandage on the back of the board. For $\Phi 30.5$ products, insert operation components to installation hole from the front of the board, tack conversion central and rotary bandage on the back of the board.



扣上固定座及触点组
Fasten mounts and contact group



拆卸时,先撬起固定座上的锁片,即可拔下固定座及触点组。

When demolition, pop locking pieces on mount at first, then can drawing out mounting and contact group.

订货须知 ORDER REMARK

- 订货时应指明按钮开关的全型号、颜色、数量,带灯时注明光源、电压、按钮帽种类(金属帽、塑料帽)。

When order, should point out button switch full type、color、volume, if with light, need remark light power、voltage、button cap(metal cap、plastic cap)

例如: LAY39-11X/R3旋钮开关50只

For example: LAY39-11X/R3 rotary switch 50 pieces

LAY39-31D/GJ AC220V 带灯按钮开关50只

LAY39-31D/GJ AC220V with light button switch 50 pieces

LAY39-12Y/au3 左边中间不可拔,右边可拔 钥匙按钮开关50只

LAY39-12Y/au3 the left middle can not pull, the right can pull key button switch 50 pieces

LAY39-11/RS B 按钮开关50只

LAY39-11/RS B button switch 50 pieces