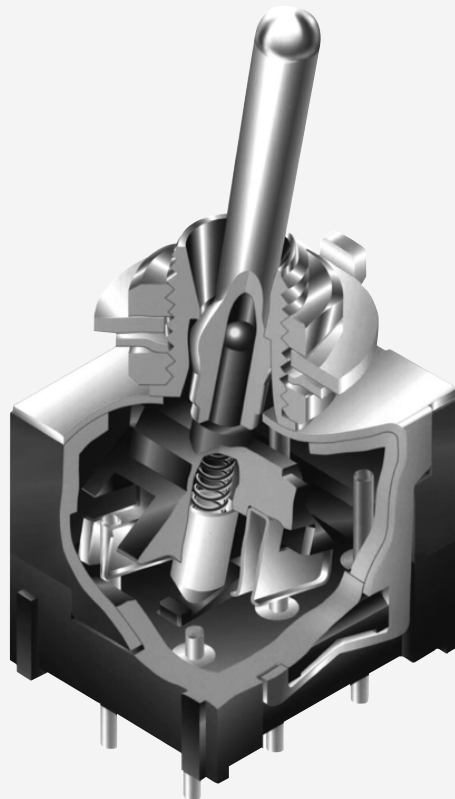


# 印刷电路板安装微型摇头开关 系列 D2



# A 通用规格

## 电气容量 (电阻性负载)

微小功率: 最大0.4VA在最高28V AC/DC  
(适用范围0.1mA~0.1A在20mV~28V)  
注: 请参阅附录中关于运行范围的更多说明。

## 其他额定参数

触点电阻: 最大50毫欧  
绝缘电阻: 1,000兆欧以上在500V DC  
绝缘强度: 触点间最低1,000V AC至少1分钟;  
触点与外壳之间最低1,500V AC至少1分钟  
机械寿命: 100,000次操作以上对于搬动杆型号  
50,000次操作以上对于锁定杆型号  
电气寿命: 50,000次操作以上  
接触时间点: 非短路 (接触前先断开)  
摆动角度: 24°

## 材质和涂覆

摇杆/搬动杆: 黄铜镀铬  
衬套: 黄铜镀镍  
支撑支架: 直型PC端子: 磷青铜镀锡; 直角型和垂直型: 黄铜镀锡  
外壳: 聚对苯二甲酸丁二醇酯(PBT) (UL94V-0)  
基座: 1和2极GFR聚酰胺(UL94V-0); 4极液晶聚合物(LCP) (UL94V-0)  
活动触点: 磷青铜镀金  
固定触点: 黄铜镀金  
端子: 黄铜镀金

## 环境数据

工作温度范围: -10°C到+70°C (+14°F到+158°F)  
湿度: 240小时内40°C (104°F)时, 湿度90~95%  
振动: 用1.5mm峰-峰振幅遍历10~55Hz频率范围、并在1分钟内返回; 3个直角方向2小时  
冲击: 50G (490m/s<sup>2</sup>) 加速度 (在6个直角方向上在6个直角方向上测试, 每个方向5次冲击)

## 印刷电路板处理

焊接: 推荐波峰焊。请参阅附录中的概略图A。  
手工焊接: 1和2极-最多3秒钟在最高350°C;  
4极-最多4秒钟在最高410°C  
清洗: 用酒精溶剂就地手工清洗。  
请参阅附录中的清洗规格。

## 标准和认证

易燃性标准: 符合UL94V-0规定的外壳和基座  
D2系列摇头开关未经过UL认证测试或CSA认证测试。  
这些开关为在低电流、微小功率电路中使用而设计。  
当按原意图用于微小电流电路时, 其结果不会产生危险的能量。

# 主要特点

隔热树脂制成的基座符合UL94V-0易燃性标准的规定。

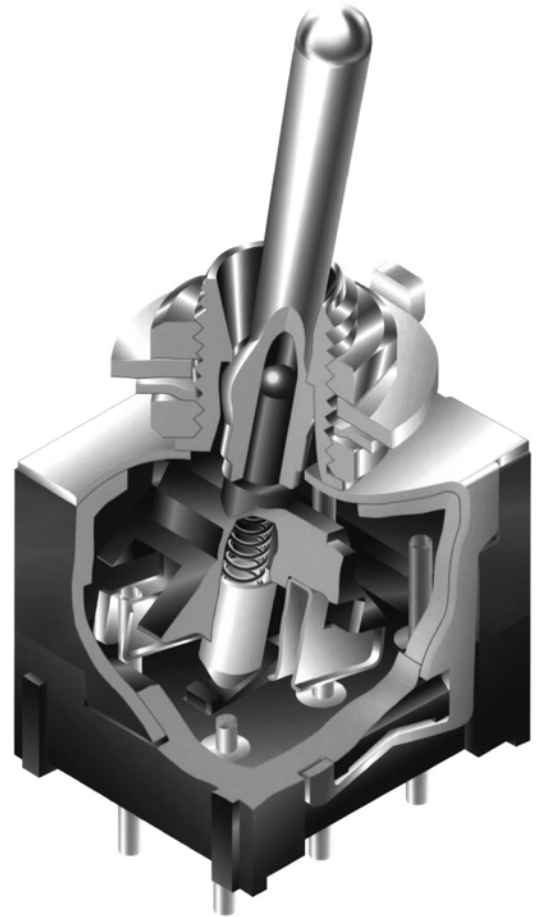
48V的最大电压容量可允许在中等功率源条件下使用，并延长运行寿命。

获奖的STC触点机构具有传统触点机构所不具备的如下优点：更加平滑、制动更可靠、触点稳定性更高、以及无与伦比的可靠性。（关于STC的详情，请参阅附录部分的术语与缩写。）

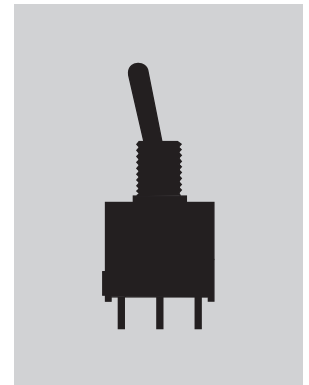
圆形.031" (0.8mm)直径印刷电路端子便于在印制电路板上组装。

端子间距符合标准.100" (2.54mm)印刷电路板的格子间距。

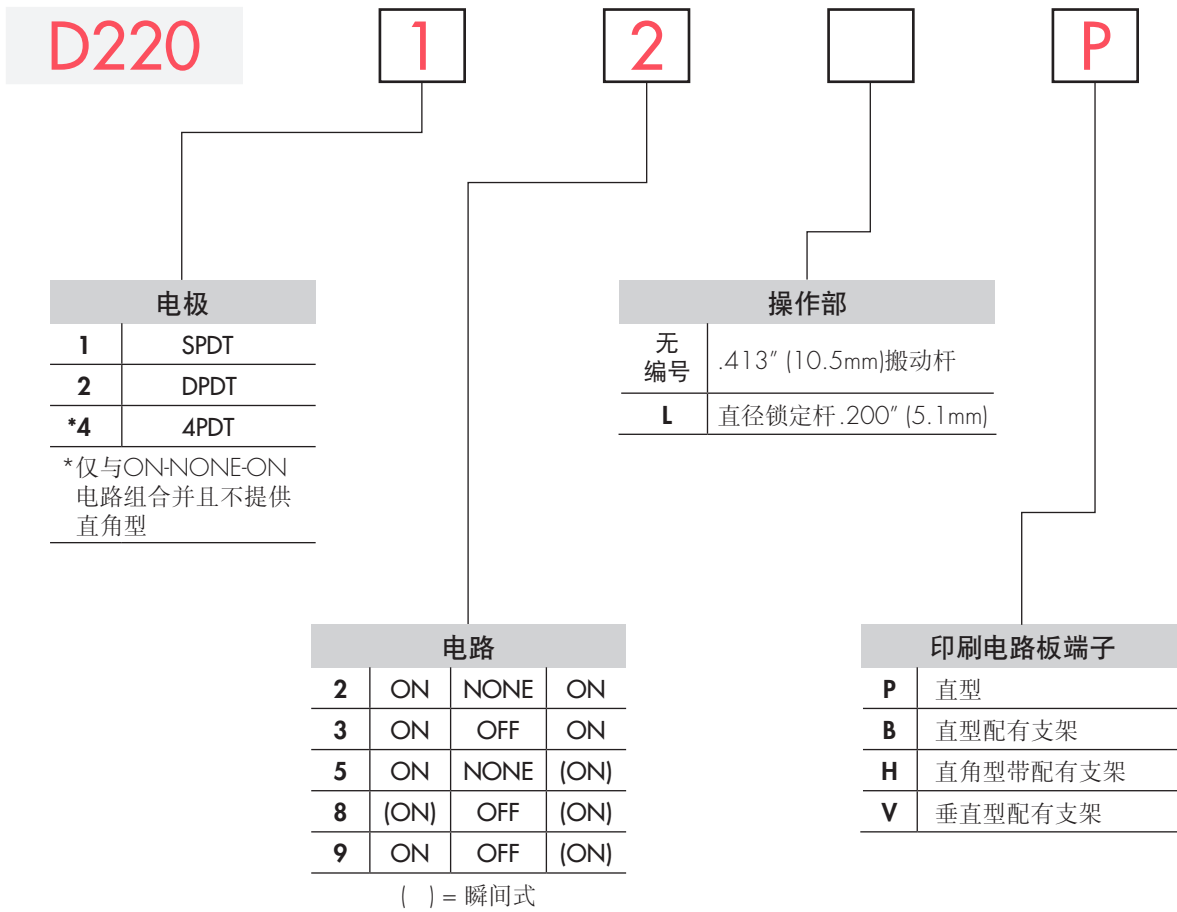
注塑端子可阻止熔融物、溶剂、以及其他污染物侵入。



实际尺寸



### 典型开关订购举例



### 典型订购举例

**D22012P**

.413" (10.5mm)  
搬动杆



SPDT  
ON-NONE-ON电路

直型PC端子

电极和电路

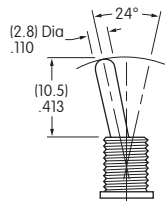
电极	型号	摇杆位置 ( ) = 瞬间式			连接的端子			投掷及其示意图
		下 键槽	中	上	下 键槽	中	上	
SP	D22012 D22013 D22015 D22018 D22019	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3	OPEN	2-1	SPDT 
DP	D22022 D22023 D22025 D22028 D22029	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3 5-6	OPEN	2-1 5-4	DPDT 
4P	D22042	ON	NONE	ON	2-3 5-6 8-9 11-12	OPEN	2-1 5-4 8-7 11-10	4PDT 

注: 端子编号并未实际印制在开关上。

操作部

无编号

.413" (10.5mm)  
搬动杆

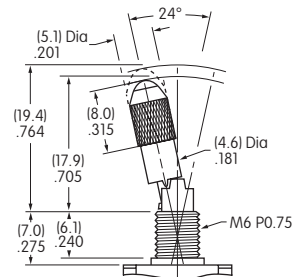


材质: 黄铜镀铬

L

.413" (5.1mm)  
直径锁定杆

材质: 黄铜镀铬



印刷电路板端子

P

直型



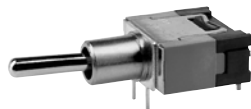
B

直型配有  
支架



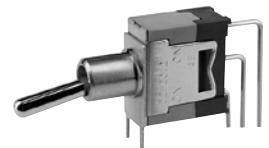
H

直角型配有支架



V

垂直型配有  
支架

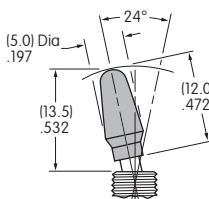


可供选购的盖帽和盖帽颜色

AT415  
搬动杆盖帽

材质: 聚乙烯

可供颜色:  
A B C E F G

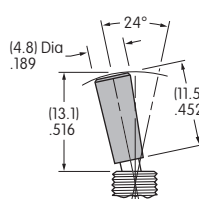


颜色编号:

AT444  
搬动杆圆锥形盖帽

材质: 聚乙烯

可供颜色:  
A B C E F G



A 黑

B 白

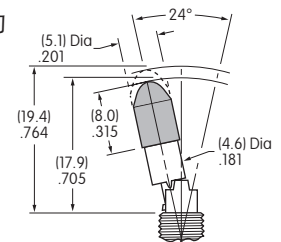
C 红

E 黄

AT427  
随同锁定杆提供的  
盖帽

材质: 经阳极  
氧化处理铝

可供颜色:  
A C G



F 绿

G 蓝

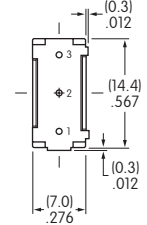
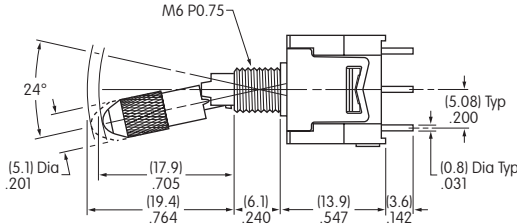
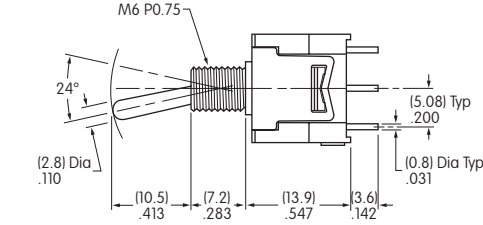
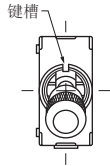
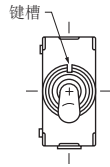
## 典型开关尺寸

### 直型PC端子·单极



D22012P

D22012LP



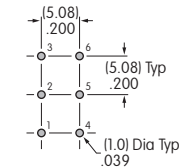
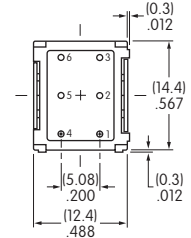
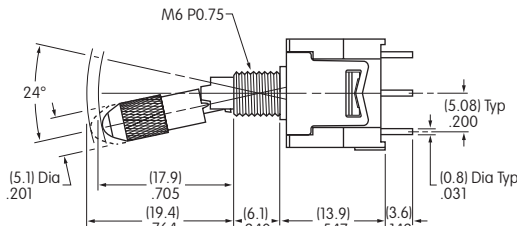
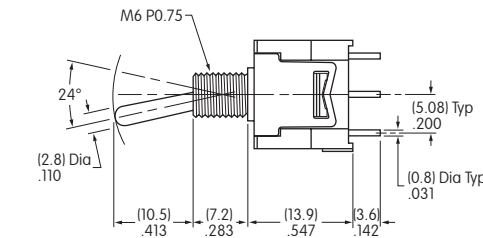
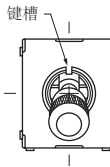
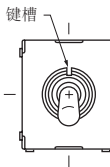
操作部处于按下位置

### 直型PC端子·双极



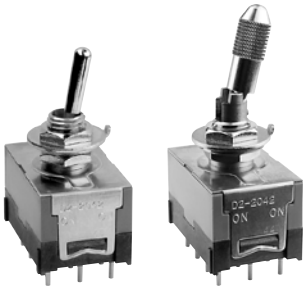
D22022P

D22022LP



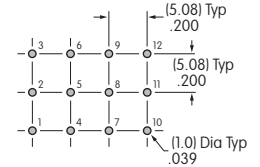
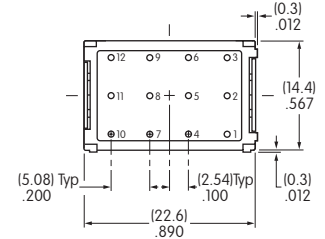
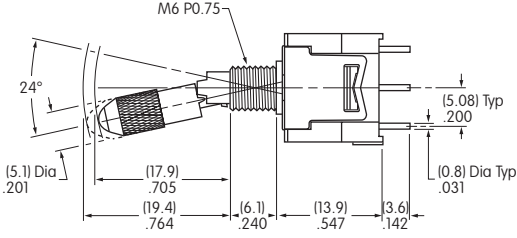
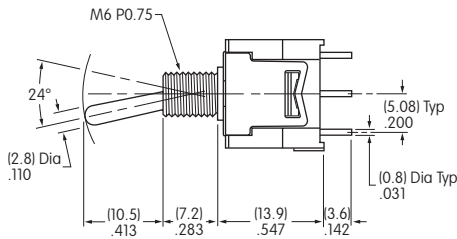
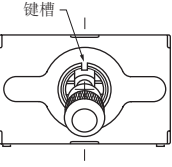
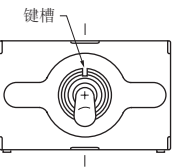
操作部处于按下位置

### 直型PC端子·4极



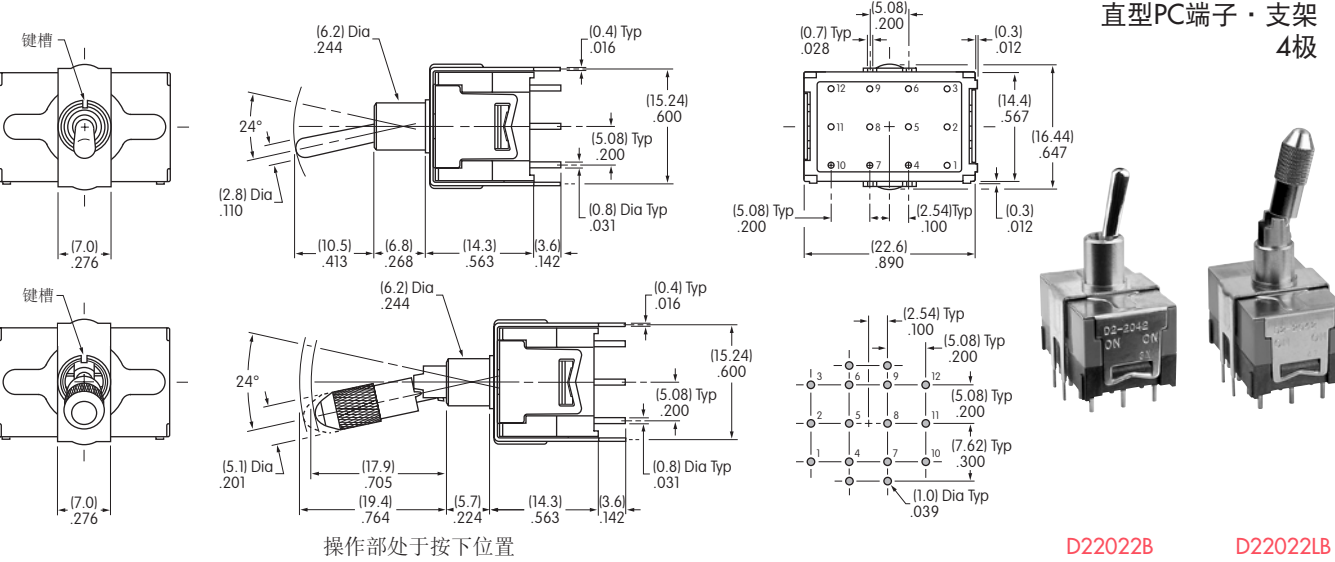
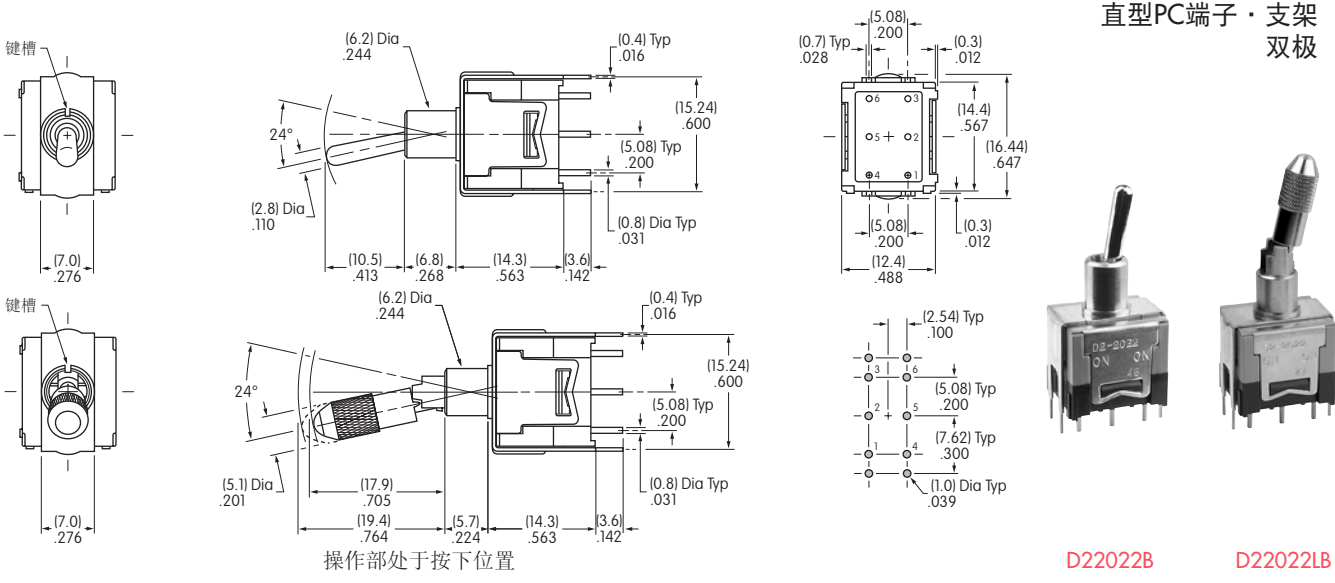
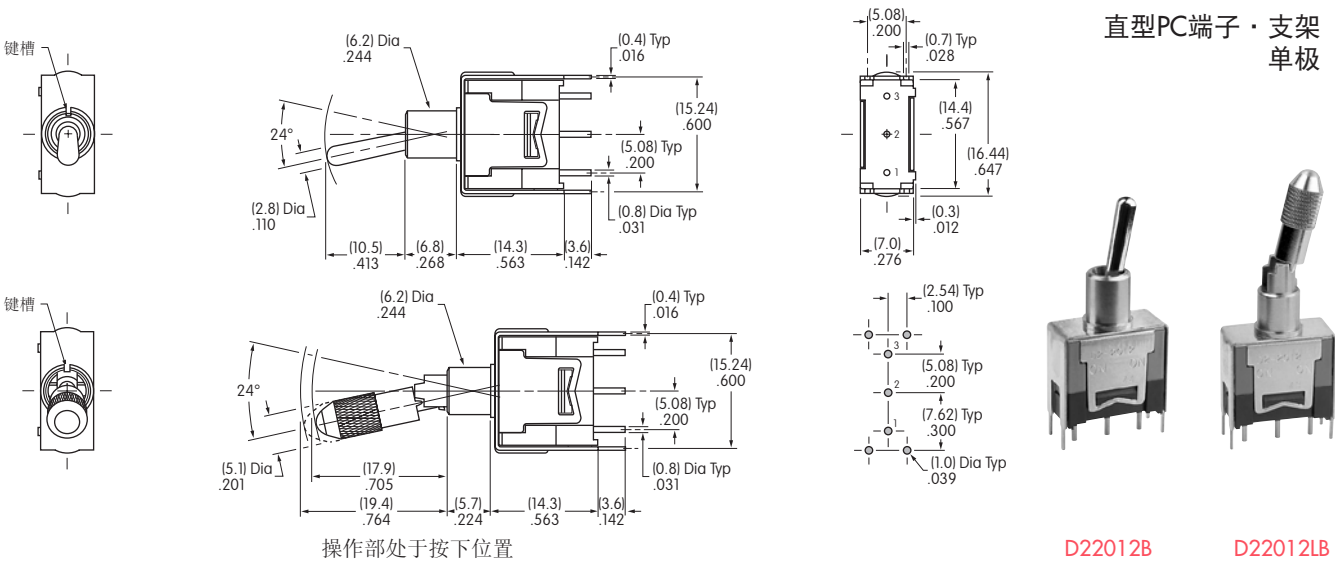
D22042P

D22042LP



操作部处于按下位置

典型开关尺寸



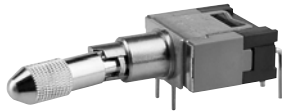
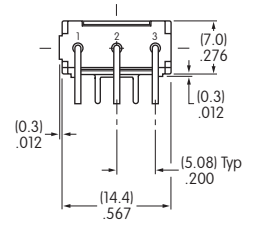
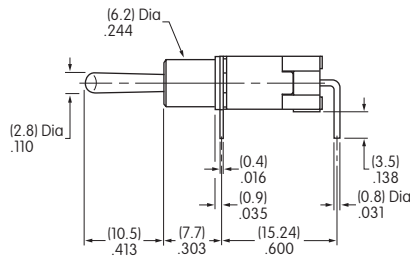
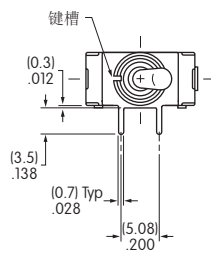
- A
- 摇头开关
- 翘板开关
- 按钮开关
- 发光按钮开关
- 可编程开关
- 钥匙锁开关
- 旋转开关
- 滑动开关
- 触觉开关
- 倾斜开关
- 触觉开关
- 指示灯
- 附件
- 附录

### 典型开关尺寸

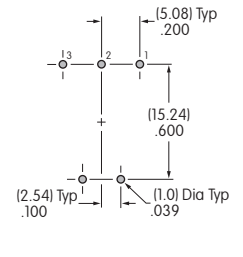
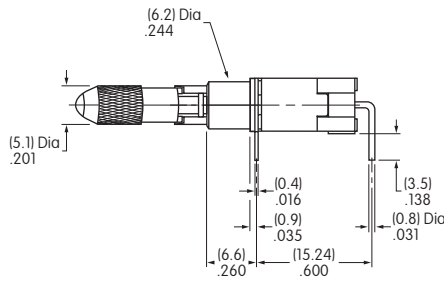
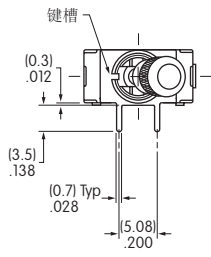
直角型PC端子·单极



D22012H



D22012LH

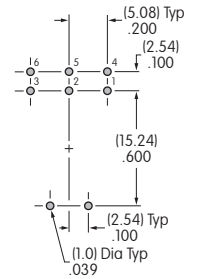
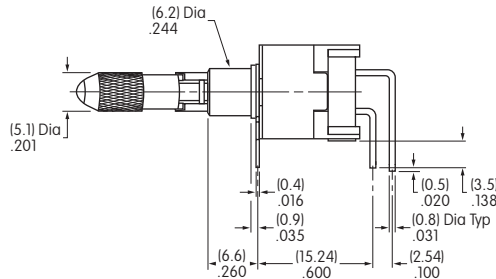
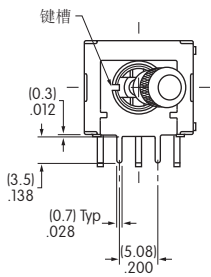
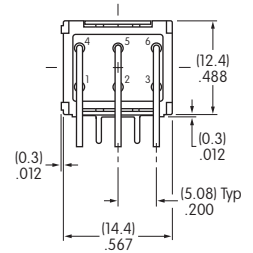
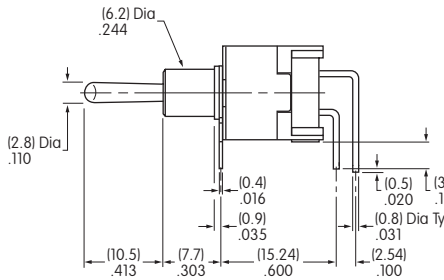
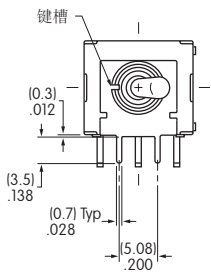


操作部处于按下位置

直角型PC端子·双极



D22022H

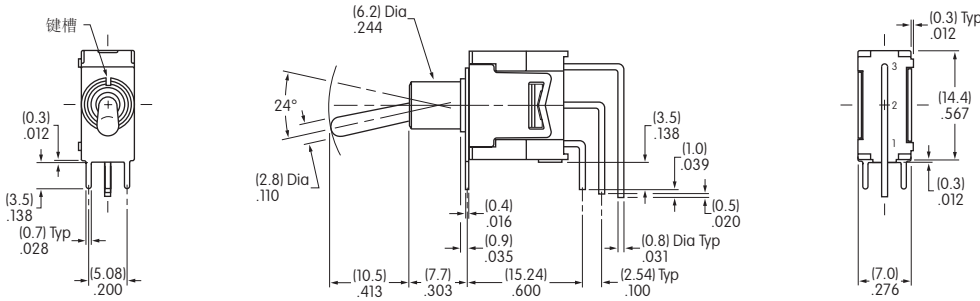


操作部处于按下位置

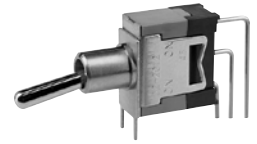


典型开关尺寸

A 摇头开关



垂直型PC端子·支架  
单极

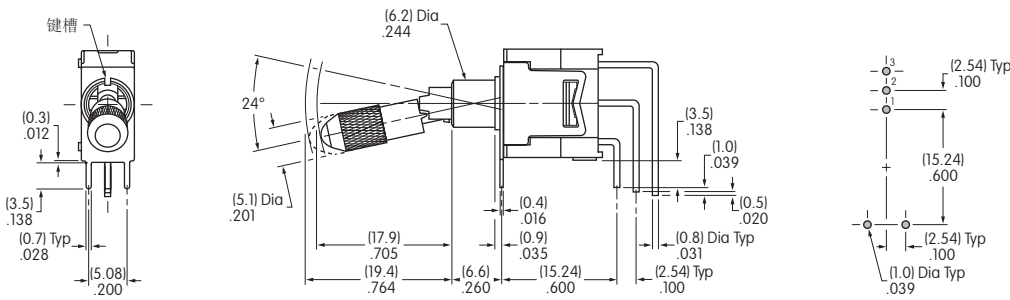


D22012V

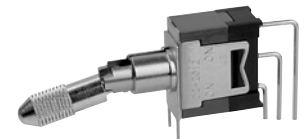
翘板开关

按钮开关

发光按钮开关



操作部处于按下位置



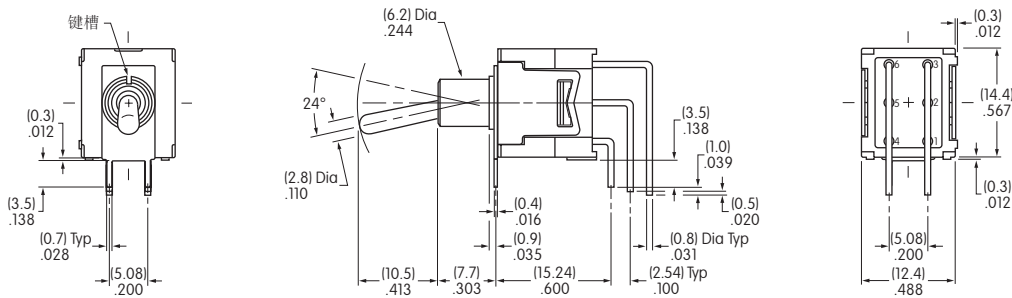
D22012LV

可编程开关

钥匙锁开关

旋转开关

垂直型PC端子·双极

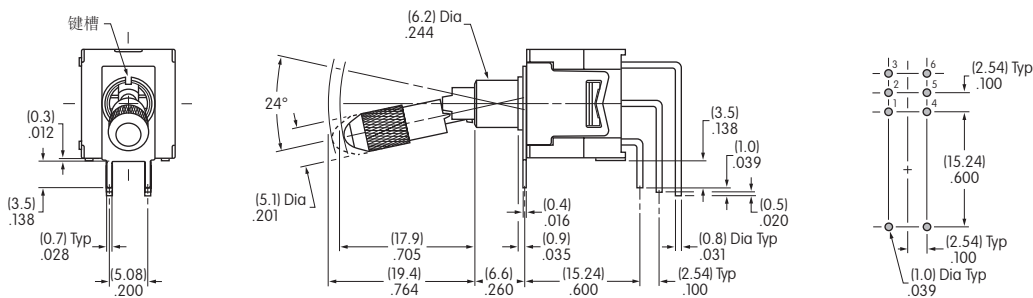


D22022V

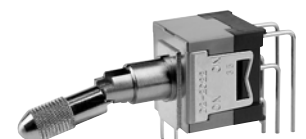
滑动开关

触变开关

倾斜开关



操作部处于按下位置



D22022LV

触觉开关

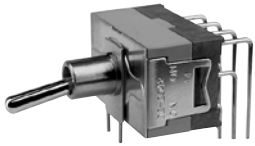
指示灯

附件

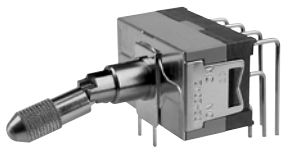
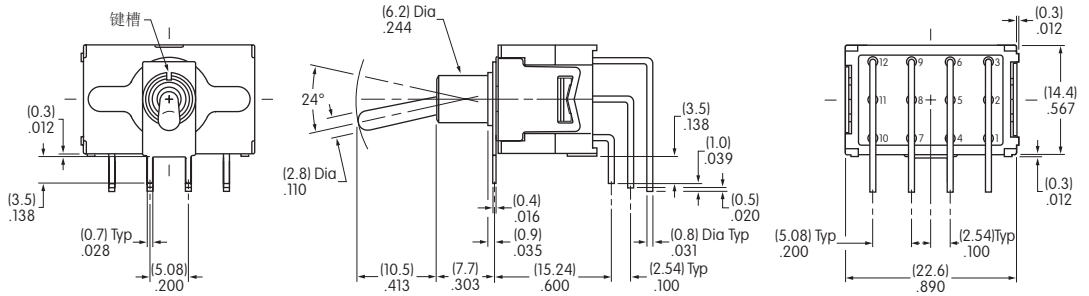
附录

## 典型开关尺寸

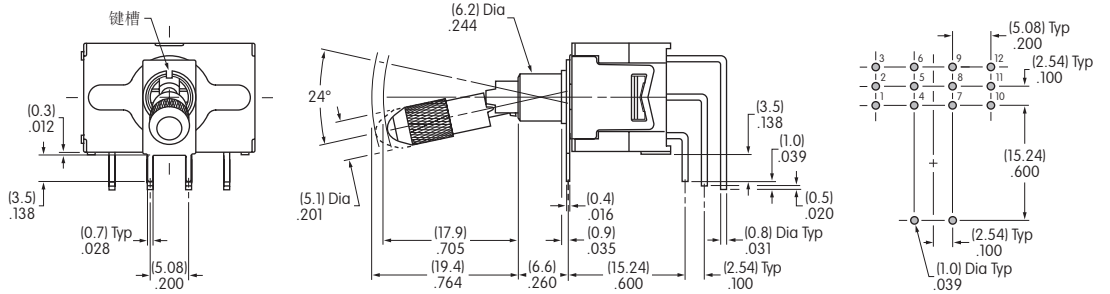
垂直型PC端子·4极



D22042V



D22042LV

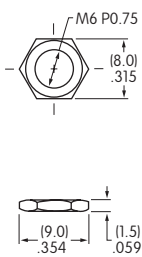


操作部处于按下位置

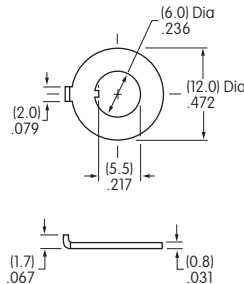
## 标准配件

## 可供选购配件

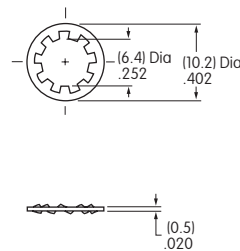
AT513M  
六角螺母  
黄铜镀镍  
附送2个



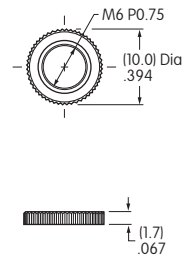
AT507M  
锁环  
钢镀锌/铬  
附送1个



AT509  
锁紧垫圈  
钢镀锌/铬  
附送1个



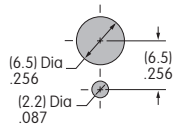
AT501M  
滚花螺母  
黄铜镀镍



## 面板裁切和最大面板厚度

有标准配件

.087" (2.2mm)  
对于标准杆

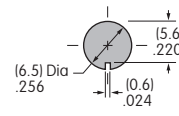


无底部六角螺母

.154" (3.9mm)  
对于标准杆

无锁环

.118" (3.0mm)  
对于标准杆



无锁环和底部六角螺母

.185" (4.7mm)  
对于标准杆

.051" (1.3mm)  
对于锁定杆

.110" (2.8mm)  
对于锁定杆

.083" (2.1mm)  
对于锁定杆

.142" (3.6mm)  
对于锁定杆

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