

MS4A 型微动开关系列 Micro switch series

◆ 安全可靠的小型开关 Safe, reliable miniature switch

- 结构紧凑, 具有微小触点间隙, 快速动作、高灵敏和微小动作行程特点。
Nice appearance, tight configuration. Characteristic: small contact gap, quick action, high sensitivity and small operating travel
- 长寿命, 高可靠:
Long life, high reliability.
- 接线端子种类齐全:
A variety of contact terminals
- 配备各种形式动臂: A variety of levers
- 广泛应用于各种家用电器、电子设备、自动化设备、通讯设备、汽车电子、仪器仪表等领域。
Widely used in home appliance, electronic equipment, automatic machine, communication equipment, car electron, apparatus and instrument etc.



◆ 技术特性 Specifications

项目 Item		特性值 Value
工作速度 Operating speed		0.1mm~1m/s(与驱动方式有关) (Related with actuator forms)
工作频率 Operating frequency		机械60次/min Mechanical 60 cycles/min; 电气25次/min Electrical 25 cycles/min;
绝缘电阻 Insulation resistance		≥100MΩ (500VDC)
接触电阻 Contact resistance		动作力>0.5N: ≤30MΩ (见注) 0F>0.5N: ≤30MΩ (see note) 动作力≤0.5N: ≤50MΩ (见注) 0F≤0.5N: 50≤MΩ (see note)
耐电压 Test voltage	同极不相接端子间 Between terminals of the same polarity	AC1000V, 50/60Hz, 1min
	带电子金属零件与地(外壳)之间、接线端与不带电金属件之间 Between current-carrying metal parts and ground(case), and between each terminal and non-current-carrying metal parts	AC1500V, 50/60Hz, 1min
抗振动 Vibration resistance		10~55Hz, 1.5mm双振幅 Double amplitude
抗冲击 Shock resistance		破坏: 动作力>0.5N: 1000m/s ² (约100G) max 动作力≤0.5N: 500m/s ² (约30G) max 故障: 动作力>0.5N: 300m/s ² (约30G) max 动作力≤0.5N: 200m/s ² (约20G) max Destruction: 0F>0.5N: 1000m/s ² (approx. 100G) max 0F≤0.5N: 500m/s ² (approx. 50G) max Malfunction: 0F>0.5N: 300m/s ² (approx. 30G) max 0F≤0.5N: 200m/s ² (approx. 20G) max
寿命 Life		机械≥1,000,000次; Mechanical ≥1,000,000 cycles 电气≥10,000次; Electrical ≥10,000 cycles

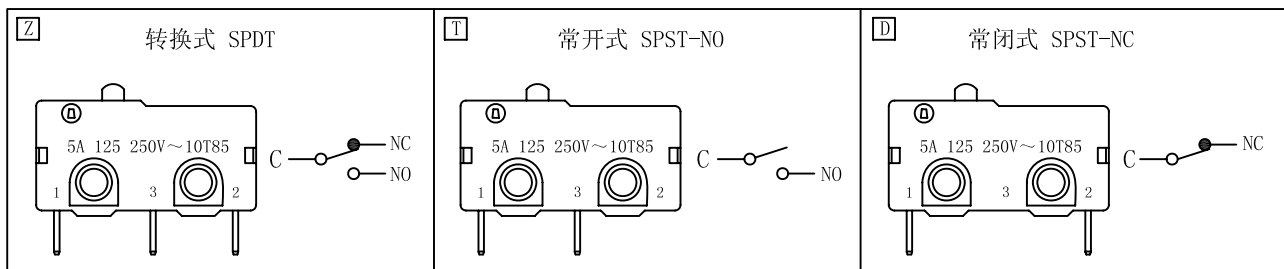
注: 指无动臂时按钮上的动作力, Note: Refers to the operating force of no lever

◆ 型号规格命名及含意 Model number legend and meanings

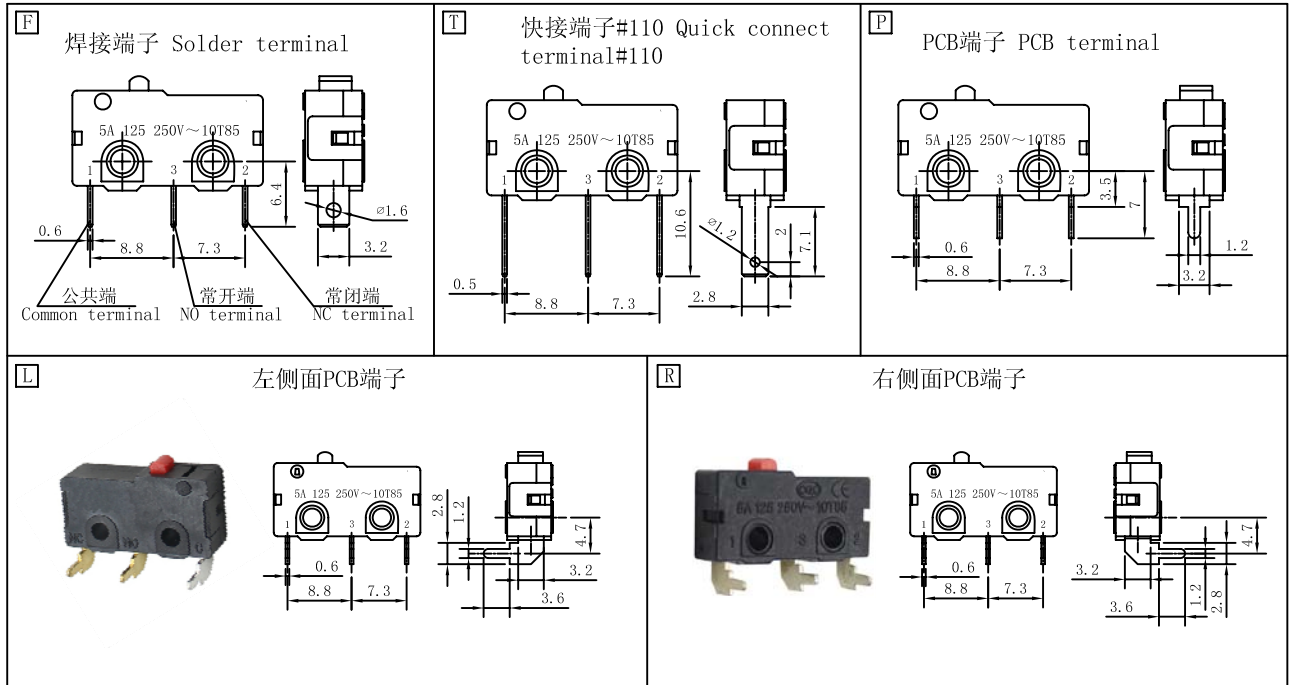
MS4A □-□□□□-(□)
1 2 3 4 5 6

1	温度等级 Degrees of temperature	无标记 No mark:T85 H:T125
2	额定值 Ratings	无标记 No mark:5A 250VAC/125VAC 5(2)A 250VAC(CQC) A:10A 250VAC/10.1A 125VAC B:3A 250VAC/3A 125VAC C:1A 250VAC/1A 125VAC F:0.1A 250VAC/0.1A 125VAC
3	接触形式 Circuit	Z:转换式 SPDT T:常开(接通)式 SPST-NO D:常开(按断)式 SPST-NC (见说明图 See illustration)
4	驱动形式 Actuator forms	1:无动臂 No lever 2:短动臂 Short lever D:长动臂 Long lever 3:中动臂 Middle lever 5:滚轮臂 Roller 4:弧形动臂 Arc lever □-非标准动臂 Not standard lever 注: □表示非标准动臂的代号, 详见动臂外形尺寸图。 Note: Indicate not standard lever, details see outline measurement drawings.
5	端子类型 Terminal type	F:焊接端子 Solder terminal P:PCB端子 PCB terminal L:左侧面PCB端子 Left side PCB terminal R:右侧面PCB端子 Right side PCB terminal T: 110快接端子 Quick-connect terminal Y:非标准端子 Not standard terminal
6	动作(max) Operating force	050:0.5N 100:1N 150:1.5N 200:2N 300:3N 注: 若是非标准动作力, 用此动作力上限值表示。 Note: if it is not standard operating force, indicate with the upper limit.

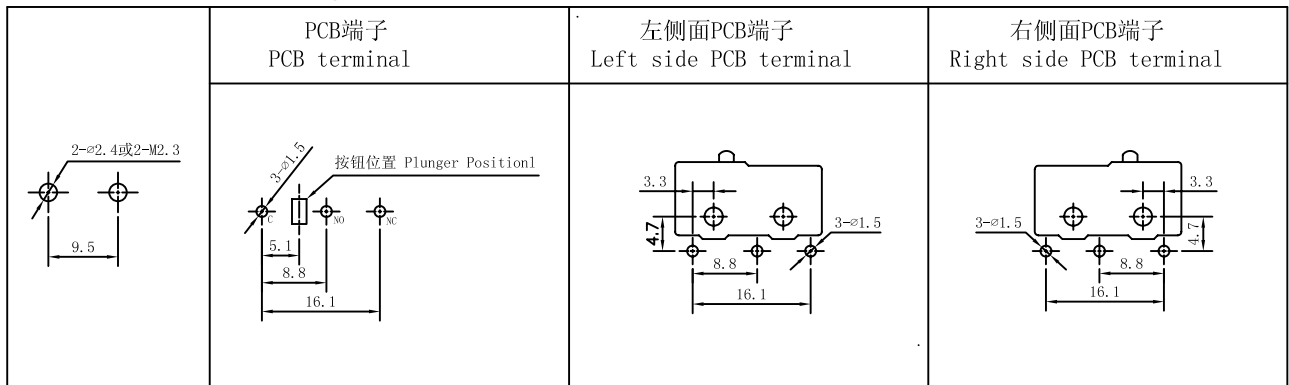
◆ 接触形式说明书 Circuit illustration



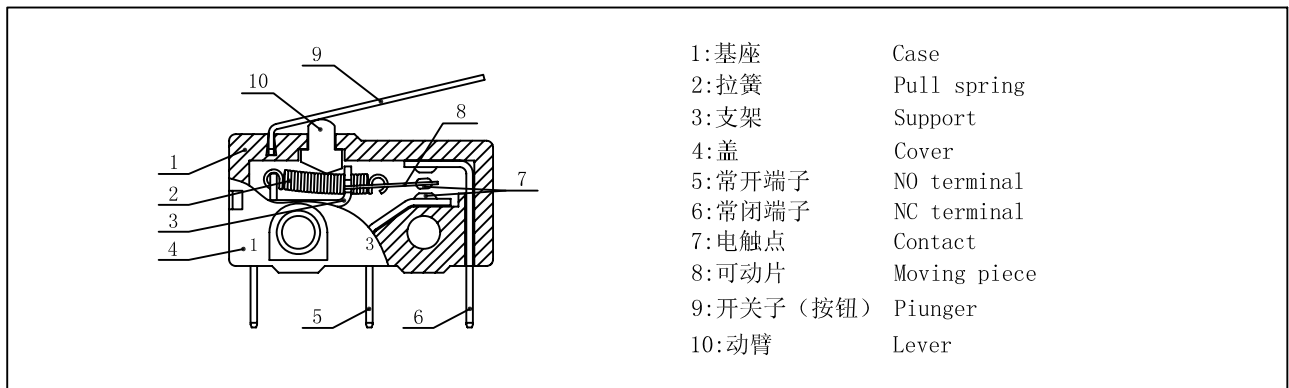
◆ 接线端尺寸 Terminal dimensions




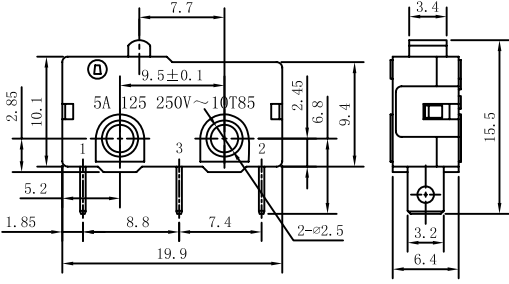

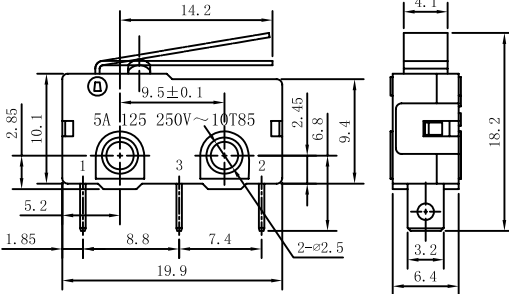
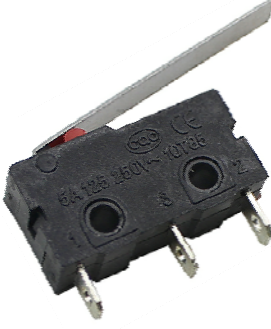
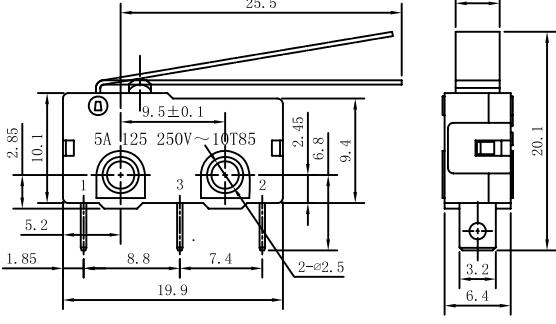

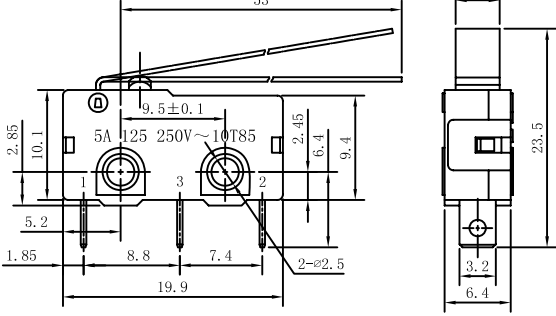
◆ 安装孔尺寸 Mounting hole dimensions




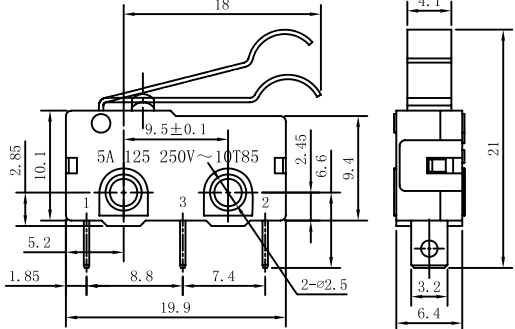

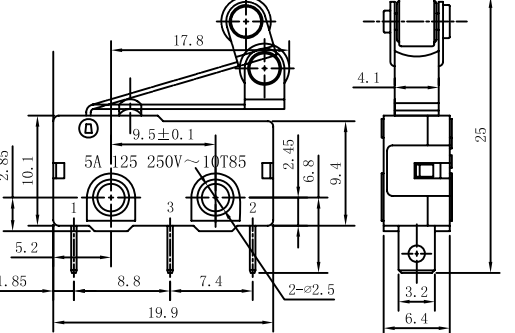

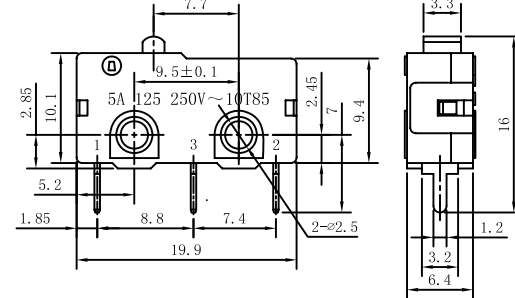

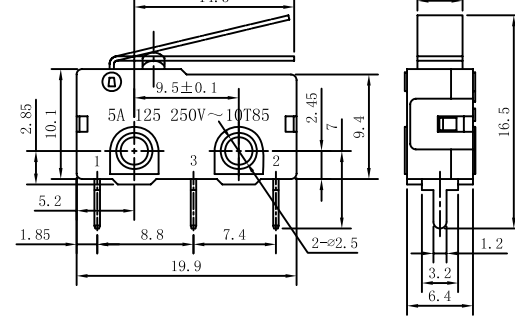
◆ 内部构造图 Internal configuration drawing



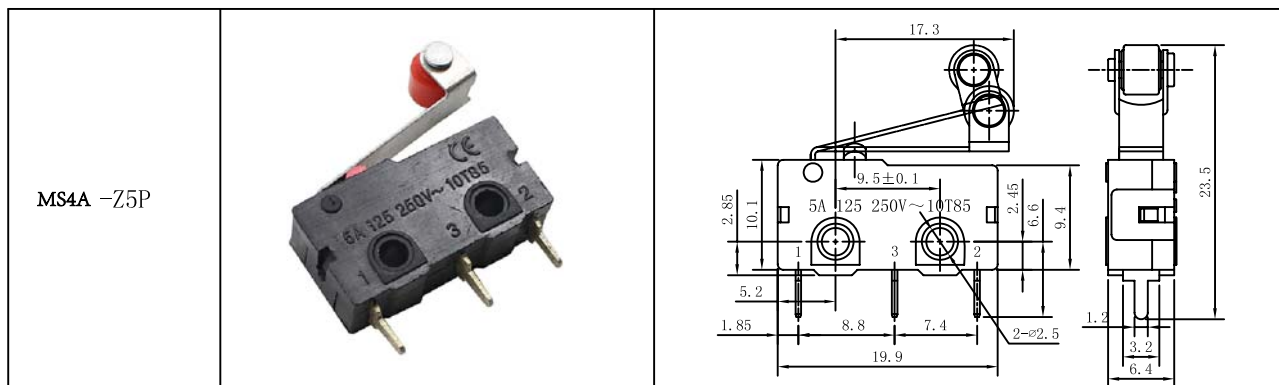
◆ 外形尺寸和动作特性 Dimensions and operating characteristics

<p>MS4A□-□Z1F-□</p>		
<p>MS4A□-□Z2F-□</p>		
<p>MS4A□-□Z3F-□</p>		
<p>MS4A□-□ZDF</p>		

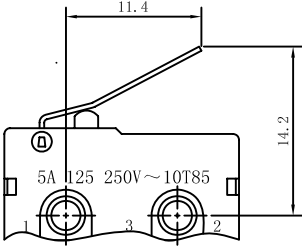
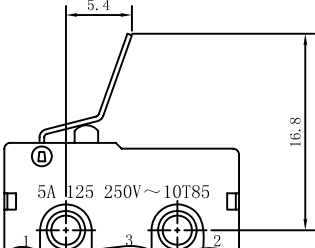
◆ 外形尺寸和动作特性 Dimensions and operating characteristics

<p>MS4A□-□Z4R-□</p>		 <p>Technical drawing showing dimensions for the MS4A□-□Z4R-□ circuit breaker. Top view dimensions include 18, 9.5±0.1, 2.85, 10.1, 5.2, 1.85, 8.8, 7.4, 19.9, 2.45, 6.6, and 9.4. Side view dimensions include 4.1, 21, 3.2, and 6.4. The component is labeled 5A 125 250V~10T85.</p>
<p>MS4A□-□Z5R-□</p>		 <p>Technical drawing showing dimensions for the MS4A□-□Z5R-□ circuit breaker. Top view dimensions include 17.8, 9.5±0.1, 2.85, 10.1, 5.2, 1.85, 8.8, 7.4, 19.9, 2.45, 6.8, and 9.4. Side view dimensions include 4.1, 25, 3.2, and 6.4. The component is labeled 5A 125 250V~10T85.</p>
<p>MS4A□-□Z1P-□</p>		 <p>Technical drawing showing dimensions for the MS4A□-□Z1P-□ circuit breaker. Top view dimensions include 7.7, 9.5±0.1, 2.85, 10.1, 5.2, 1.85, 8.8, 7.4, 19.9, 2.45, 7, and 9.4. Side view dimensions include 3.3, 16, 1.2, 3.2, and 6.4. The component is labeled 5A 125 250V~10T85.</p>
<p>MS4A□-□Z2P-□</p>		 <p>Technical drawing showing dimensions for the MS4A□-□Z2P-□ circuit breaker. Top view dimensions include 14.3, 9.5±0.1, 2.85, 10.1, 5.2, 1.85, 8.8, 7.4, 19.9, 2.45, 7, and 9.4. Side view dimensions include 4.1, 16.5, 1.2, 3.2, and 6.4. The component is labeled 5A 125 250V~10T85.</p>

◆ 外形尺寸和动作特性 Dimensions and operating characteristics



◆ 可供选择的非标准动臂代号和外形特征尺寸 Not standard levers for choose and outline characteristic dimension

动臂代号 Lever code	外形特征尺寸 Outline characteristic dimensions
<p>M</p>	
<p>N</p>	
<p>Q</p>	