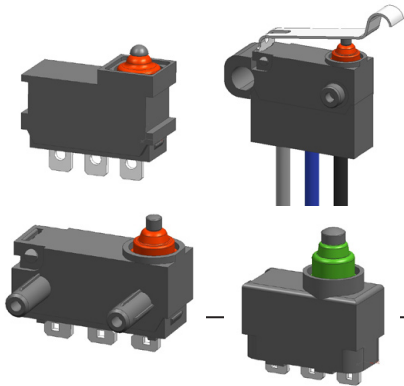




ZD 系列

超小型防水防尘微动开关

■ 特点

- ◆ 防水防尘（IP67）设计
- ◆ 体积小巧，结构紧凑
- ◆ 长寿命，高可靠性
- ◆ 接线端子种类齐全
- ◆ 配备各种形式操作柄
- ◆ 广泛应用于各种汽车控制家用及工业控制领域
- ◆ 多种安装外形尺寸满足不同的安装要求

■ 应用

- ◆ 汽车
- ◆ 空调
- ◆ 通信
- ◆ 电动牙刷
- ◆ 玩具

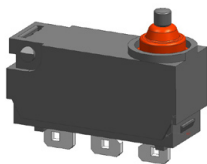
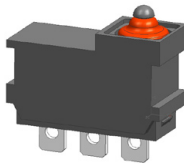
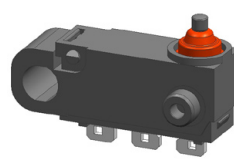
■ 特性参数

额定值	0.1A/125VAC; 3A/12VDC; 1A/24VDC; 0.5A/42VDC u 1E5.
接触电阻（初始值）	Max.100mΩ
绝缘电阻（250VDC 1 分钟时）	Min.100MΩ
绝缘强度	500VAC（50~60Hz）
保存温度范围	-25℃ ~85℃
保存湿度	40℃时最大 85%R.H
抗振动	10~55Hz，位移 0.75mm（p-p）
电气寿命	10mA–Min.500,000 次操作；3A–Min.6,000 次操作
电气操作频率	10mA– 每分钟 120 次操作；3A–1 每分钟 10~30 次操作
机械寿命	Min.500,000 次操作（取决于型号）
机械动作频率	每分钟 120 次操作

ZD Series Micro Switch Ordering Instruction ZD 系列微动开关订货型号指引

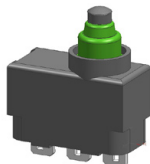
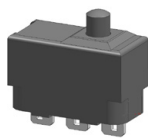
ZD	30	S	10	A	0	2	A	-	E	A	1	-	Z
Switch Type 开关类别	Electrical Rating 额定负载	Operating Force at pin Plunger,Max 操作力(最大值) 数据在不带操作柄 测得	Terminal Style 端子类型	Lever Type 操作柄类型	Circuit Code 接触形式	Shape and Posts 外形与 定位柱	Posts Dimension 定位柱尺寸		UL Guage (for molded lead wires type only) UL线规 (仅适用于带线型)	UL Number(fro molded lead wires type only) UL 号码 (仅适用于带线型)	Wires length 线长		Special Designator 特别设计 代码
ZD Series Sealed Micro- Switch ZD 系列 微动开关	10 10mA 12VDC u 5E5 镀金	S 130gf Max	01 01: Molded lead wires downwards. 带电线型号: 01: 底面出线	A Pin Plunger 柱式按拳	0 SPDT 单击双投	1 A type no post A型无定位柱	Standard posts:2.60mm x5.0mm 标准型定位柱 2.60mmx5.0mm		No molded lead wires 不带电线	No molded lead wires 不带电线	300mm length standard lead wires 300mm标准线 长		S Special code 特殊说明
	20 10mA 12VDC u 5E5		02 02: Molded lead wires on left side(plunger side) 带电线型号: 02: 左侧(按拳侧)出 线	B B type Leaf lever 水平手柄	3 SPST-NO 单级单投-常开	2 A type left side posts A型左定位柱	A Φ2.2mmX0. 9mm posts. Φ2.2mmx0.9 mm定位柱		E 20#	A UL1007	1 280mm length 280mm长		Z Special code 特殊说明
	30 0.1A /125VAC; 3A/ 12VDC ; 1A /24VDC; 0.5A/ 42VDC u 1E5.		03 03:Molded lead wires on right side 带电线型号: 03: 右侧(远离按拳 侧)出线	C C type straight leaf lever 直手柄	4 SPST-NC 单级单投-常闭	3 A type right side posts A型右定位柱	B Φ2.5mmX1. 5mm posts Φ2.5mmX1. 5mm定位柱		F 22#	C UL1430			
			10 Solder terminals 焊接端子	H H type simulated Roller leaf lever 模拟滚轮手柄		4 B type no post B型无定位柱			G 24#	D UL1061			
			20 Straight PCB terminals 直PCB端子	S Special lever 特殊手柄		5 B type left posts B型左定位柱			H 26#	E UL1330			
			30 Short Solder terminals 短焊接端子			6 B type right side posts B型右定位柱			I 28#	F AVSS			
			40 None-hole short solder terminals 无孔短焊接端子			7 M3 type posts M3型定位柱			J 30#	H UL1332			
			50 Right side PCB terminals 右向PCB端子			13 C type no Post C型无定位柱			K 32#				
			60 Left side PCB terminals 左向PCB端子			14 C type left posts C型左定位柱			L 34#				
			70 Long solder terminals 长焊接端子			15 C type right posts C型右定位柱							
			99 Special terminals 特殊端子			16 D type no post D型无定位柱							
						17 D type left side posts D型左定位柱							
						18 D type right side posts D型右定位柱							
													

Shape and Posts 外形与定位柱


A type basic shape
A 型基本外形

B type basic shape
B 型基本外形

M3 type basic shape
M3 型基本外形

1#: A type no post A 型无定位柱	2#: A type left side posts A 型左定位柱	3#: A type right side posts A 型右定位柱	4#: B type no posts B 型无定位柱
5#: B type left side posts B 型左定位柱	6#: B type right side posts B 型右定位柱	7#: M3 type posts M3 型定位柱	

Shape and Posts 外形与定位柱


C type basic shape
C 型基本外形

D type basic shape
D 型基本外形

13#: C type no posts C 型无定位柱	14#: C type left side posts C 型左定位柱	15#: C type right side posts C 型右定位柱
16#: D type no posts D 型无定位柱	17#: D type left side posts D 型左定位柱	18#: D type right side posts D 型右定位柱

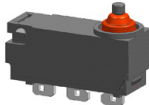
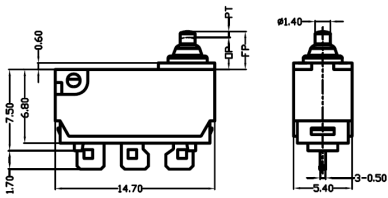
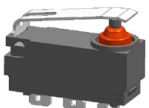
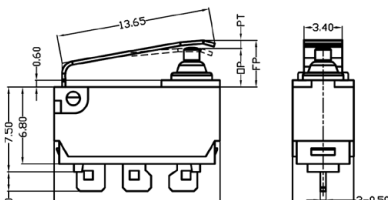
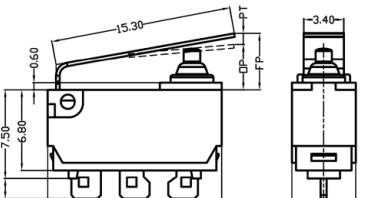
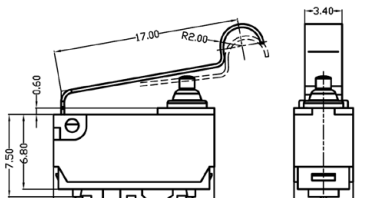
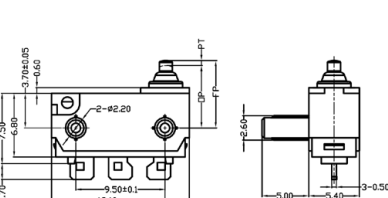
Posts Dimension 定位柱尺寸

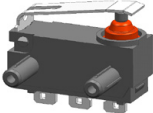
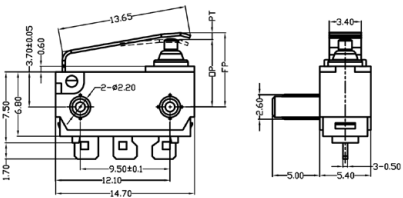
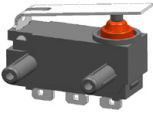
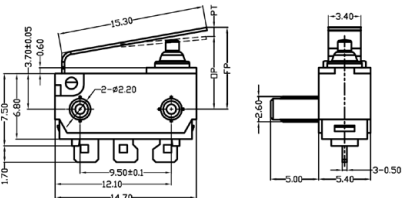
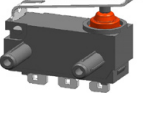
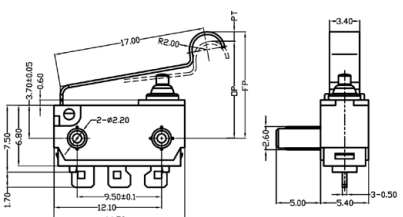
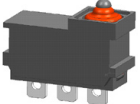
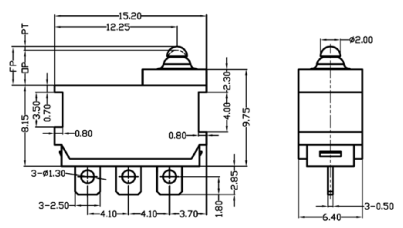
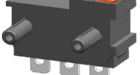
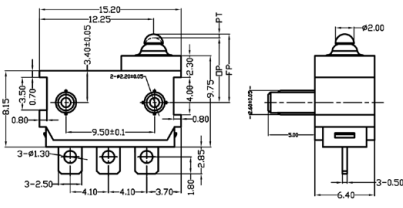
None: Standard posts: ϕ 2.60mmx5.0mm 标准型定位柱: ϕ 2.60mmx5.0mm	A#: ϕ 2.2mmx0.9mm posts. ϕ 2.2mmx0.9mm定位柱	B#: ϕ 2.5mmx1.5mm posts. ϕ 2.5mmx1.5mm定位柱

Mounting hole dimension 安装孔尺寸

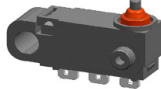
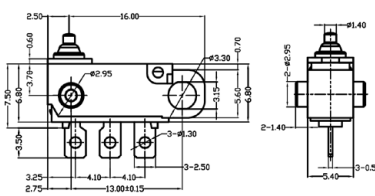
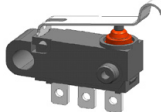
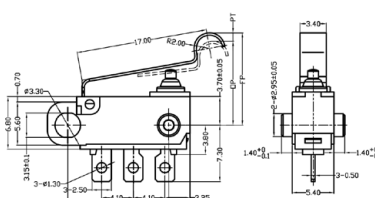
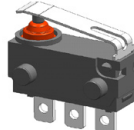
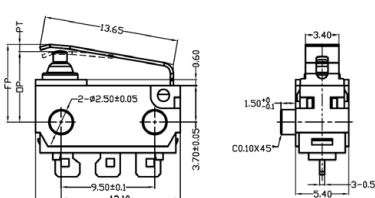
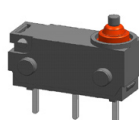
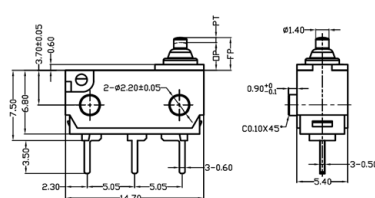
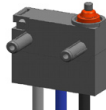
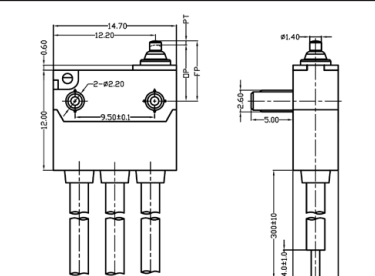
Space between Posts 定位柱间距	Straight PCB terminals mounting hole 直PCB端子安装孔	Posts direction define 定位柱方向识别
Left/Right PCB terminals mounting hole 左右PCB端子安装孔	M3 type mounting hole M3 型安装孔	

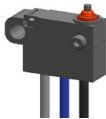
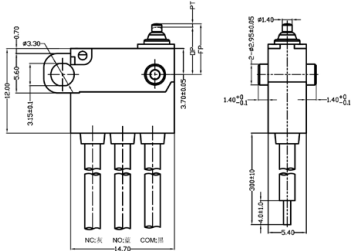
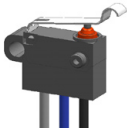
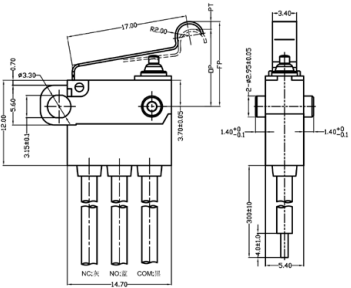
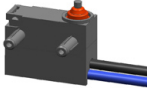
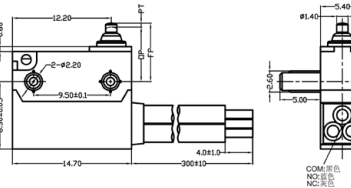
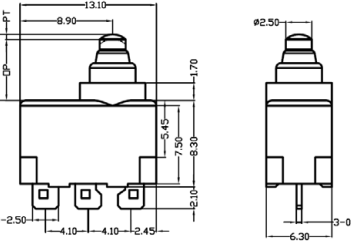
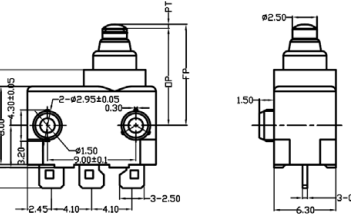
Typical model characters 常用型号参数表

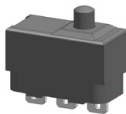
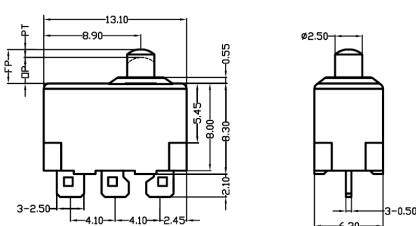
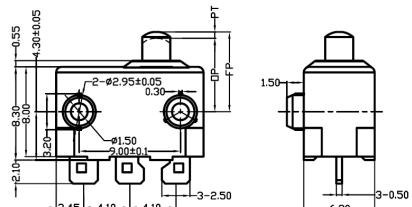
No. 序号	Part Number 型号	Actuators Types	Operating characteristics							
			OF Max.(g)	RF Min.(g)	PT Max.(mm)	OT Min.(mm)	DT Max.(mm)	FP Max.(mm)	OP (mm)	
1	ZD□□□10A01-Z 		S	130	13	0.8	0.8	0.2	3.65	3.05 ± 0.2
2	ZD□□□10B01-Z 		S	200	30	3	0.8	0.5	5.7	3.40 ± 0.5
3	ZD□□□10C01-Z 		S	195	25	3.5	1.35	0.6	6.8	3.7 ± 0.6
4	ZD□□□10H01-Z 		S	180	20	3.8	1.5	0.7	9.8	7.0 ± 0.7
5	ZD□□□10A03-Z 		S	130	13	0.8	0.8	0.2	7.35	6.75 ± 0.2

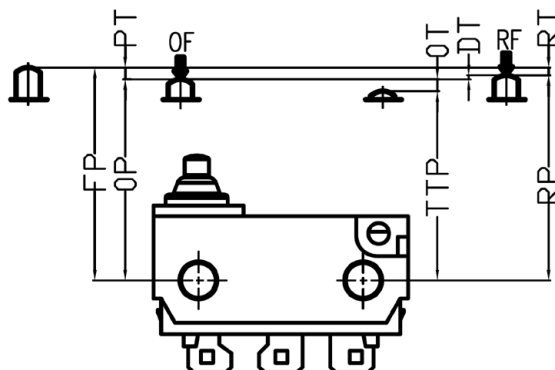
No. 序号	Part Number 型号	Actuators Types	Operating characteristics							
			OF Max.(g)	RF Min.(g)	PT Max.(mm)	OT Min.(mm)	DT Max.(mm)	FP Max.(mm)	OP (mm)	
6	ZD□□□10B03-Z 		S	200	30	3	0.8	0.5	9.4	7.10±0.5
7	ZD□□□10C03-Z 		S	195	25	3.5	1.35	0.6	10.5	7.4±0.6
8	ZD□□□10H03-Z 		S	180	20	3.8	1.5	0.7	13.5	10.7±0.7
9	ZD□□□70A04-Z 		S	130	13	0.8	0.8	0.2	4.1	3.45±0.2
10	ZD□□□70A06-Z 		S	130	13	0.8	0.8	0.2	7.5	6.85±0.2

Typical model characters 常用型号参数表

No. 序号	Part Number 型号	Actuators Types	Operating characteristics							
			OF Max.(g)	RF Min.(g)	PT Max.(mm)	OT Min.(mm)	DT Max.(mm)	FP Max.(mm)	OP (mm)	
11	ZD□□□10A07-Z 		S	130	13	0.8	0.8	0.2	7.35	6.75 ± 0.2
12	ZD□□□70H07-Z 		S	180	20	3.8	1.5	0.7	13.5	10.7 ± 0.7
13	ZD□□□70B02B-Z 		S	200	30	3	0.8	0.5	9.4	7.10 ± 0.5
14	ZD□□□20A03A-Z 		S	130	13	0.8	0.8	0.2	7.35	6.75 ± 0.2
15	ZD□□□01A03□-Z 		S	130	13	0.8	0.8	0.2	7.35	6.75 ± 0.2

No. 序号	Part Number 型号	Actuators Types	Operating characteristics							
			OF Max.(g)	RF Min.(g)	PT Max.(mm)	OT Min.(mm)	DT Max.(mm)	FP Max.(mm)	OP (mm)	
16	ZD□□□01A07□-Z 		S	130	13	0.8	0.8	0.2	7.35	6.75 ± 0.2
17	ZD□□□01H07□-Z 		S	180	20	3.8	3.8	0.7	13.5	10.7 ± 0.7
18	ZD□□□02A03□-Z 		S	130	13	0.8	0.8	0.2	7.35	6.75 ± 0.2
19	ZD□□□10A013-Z 		S	180	20	1.5	0.7	0.25	14.85	5.4 ± 0.3
20	ZD□□□10A015-Z 		S	180	20	1.5	0.7	0.25	18.85	9.4 ± 0.3

No. 序号	Part Number 型号	Actuators Types	Operating characteristics							
			OF Max.(g)	RF Min.(g)	PT Max.(mm)	OT Min.(mm)	DT Max.(mm)	FP Max.(mm)	OP (mm)	
21	ZD□□□10A016-Z 		S	130	8	1.5	0.7	0.25	11.6	2.2 ± 0.3
22	ZD□□□10A018-Z 		S	130	8	1.5	0.7	0.25	15.6	6.2 ± 0.3



代码 Code	参数名称 Name	含义 Meanings
PT	动作行程 (预行程) Pre travel	驱动件从自由位置到动作位置间的位移 The displacements of actuator from free position to operating position.
OP	动作位置 Operating position	驱动件在瞬间机构发生正向动作瞬间所处的位置 The position where the actuator moved obverse on snap-action parts.
OT	超行程 Over travel	驱动件从动作位置到全行程位置间的位移 The displacements of actuator form operating positing to total travel position.
MD(or DT)	差动行程 Movement differential travel	驱动件从动作位置到释放位置或释放位置到动作位置间的位移 The displacements of actuator form release position to free position.
RT	释放行程 Release travel	驱动件从释放位置到自由位置间的位移 The displacements of actuator from release position to free position.
OF	动作力 Operating force	驱动件从自由位置到动作位置所必须的最大操作力 The max. force of displacements of actuator from free position to operating position.
RF	释放力 Release force	驱动件自正向动作位置返回到释放位置, 操作减小到的数值 The force when the actuator moved back to release position from obverse operating position.
TF	全行程力 Total travel force	驱动件在全行程位置所承受的最小操作力 The smallest force of displacements of actuator on total travel position.
TTP	全行程位置 Total travel position	驱动件被止动时所处的位置 The position where the actuator be stopped.
RP	释放位置 Release position	驱动件在瞬间机构发生反向动作瞬间所处的位置 The position where the actuator moved reversely on snap-action parts.
FP	自由位置 Free position	驱动件在不承受操作力以及力不足以引起位移时所处的位置 The position where the actuator lead the displacements when its out of force is not enough.