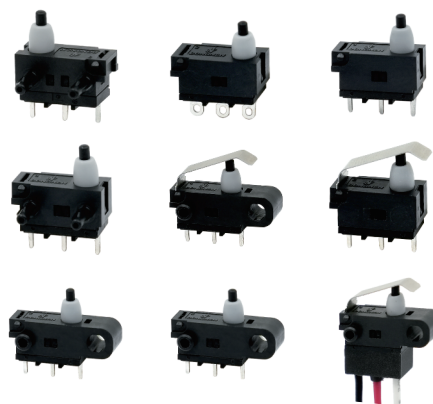


WS11 型防水微動開關系列 Micro switch series

◆ 特點和用途 Characteristics and usage

- 滑動式機構可斜壓的長行程非短路式開關。密封結構為一體式結構，長行程、防塵、防水。採用雙面滑動接觸結構，接觸可靠、抗衝擊能力強。
Long stroke non-short circuit switch sliding mechanism
Can be inclined, sealing structure is integrated structure, long travel, dustproof, waterproof. Double-sided sliding contact structure, Reliable contact, strong impact resistance.
- 外殼備有無柱、單側和雙側柱子，可滿足不同的安裝要求。
The housing is equipped with columnless, single side and double side columns to meet different installation requirements.
- 接線端子種類齊全，可配備符合負載要求的導線。
All kinds of wiring terminals can be equipped with wires that meet the load requirements.
- 可在汽車側門、後備箱、引擎蓋和白色家電中使用。
Can be used in car side doors, trunk, hood and home appliance.



◆ 技術特性 Technical Characteristics

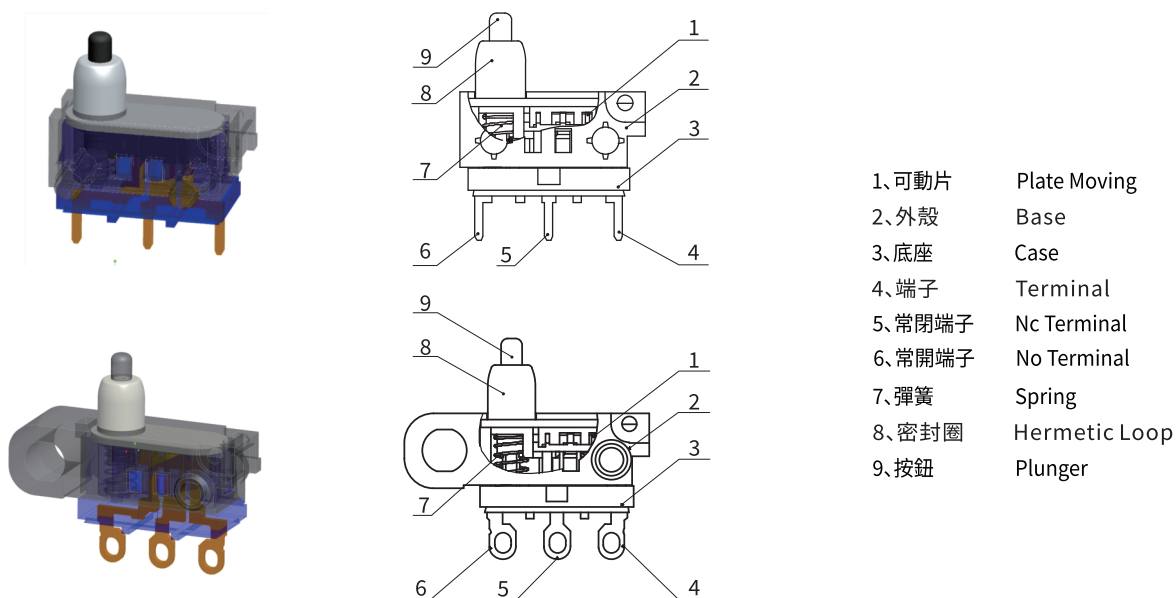
項目 Item		特性值 Value
环境温度 Environment temperature		-40~+85°C
相對濕度 Relative humidity		95%,40°C
工作速度 Operating speed		1mm~500mm/s (無動臂時 No lever)
工作頻率 operating frequency		機械 60次/min; 電氣 25次/min Mechanical 60 cycles/min; Electrical 25cycles/min
绝缘电阻 Insulation resistance		≥100MΩ (500VDC)
接触电阻 Contact resistance		≤500mΩ
工频耐电压 Test voltage	不相接端子間 Between non-continuous terminals	AC500V,50/60Hz, 1min
	端子與不帶電金屬件之間 端子與地(外殼)之間 Between each terminal and other exposed metal parts Between each terminal and ground	
抗振動 Vibration resistance		10~55Hz, 1.5mm雙振幅 double amplitude
抗冲击 Shock resistance		最小 Min.: 294m/s ² (30G) 接觸故障持續時間不超過 1ms Contact opening max. 1 msec.
防觸電保護等級 Electric shock proof protection grade		I 級 class
外殼防護等級 Degree protection provided by enclosure		IEC IP67 (不包括外露端子部分) IEC IP67 (Excluding exposed terminals)
壽命 Life		機械 ≥300,000次 Mechanical ≥300,000cycles 電氣 ≥300,000次 Electrical ≥300,000cycles

◆ 型號規格命名及含義 Model number legend and meanings

WS11 - □ □ □ - □ □ □ - □ □ - (□)
1 2 3 4 5 6 7 8 9

1 額定值 Ratings	01:0.1A 12VDC/50μA 5VDC 03:0.3A 16VDC/1mA 5VDC	8 防護等級 Portection degree	無標記 No mark :Ip67 (端子型, 端子處除外 Except teminal part of terminal type) IP□□:其它等級 Other degrees																		
2 接觸形式 Circuit	Z:轉換式SPDT T:常開 (按通) 式SPST-NO D:常閉 (按斷) 式SPST-NC																				
3 驱动形式 Actuator forms	0:无动臂 No lever □:动臂代号																				
4 端子类型 Terminal types	F:焊接式端子Solder terminal P:PCB端子PCB terminal PL:左面PCB端子Left PCB terminal PR:右面PCB端子Right PCB terminal B:底部導線型Bottom wire type L:左面導線型Left side wire type R:右面導線型Right side wire type	9 附加代號及導線 顏色配置代號 Additional specs code and wire color code	■ 用数字或字母表示有特殊要求, 如非標準端子, 特殊動作特性值; 外形尺寸或結構與基本型有差異。用二位阿拉伯數字表示。 Indicates that there are special requirements, such as non-standard terminals and special operating characteristics values; The dimensions or construction differ from the basic model. It is represented by two Arabic numerals. ■ 導線配置為非默認顏色: 用三個英文字母按COM、NC、NO順序表示導線顏色配置; 若是常開式或常閉式開關, 空缺位置用字母O表示。 (顏色代號見表1)。 Wire configuration is not the default color: use three English letters in the order of COM, NC, NO to indicate the wire color configuration; If the switch is normally open or normally closed, the vacant position is indicated by the letter O. (See Table 1 for color codes). <table><tr><td>顏色 Color</td><td>紅</td><td>白</td><td>藍</td><td>黑</td><td>綠</td><td>黃</td><td>灰</td><td>紫</td></tr><tr><td>代號 Code</td><td>R</td><td>W</td><td>L</td><td>B</td><td>G</td><td>M</td><td>H</td><td>P</td></tr></table> 示例example:BWR——黑白紅 ;BOR——黑(無)紅 ;RWO——紅白(無) ■ 若同時有附加規格代號和導線顏色代號, 則導線顏色代號位於附加規格代號之後。 注: 導線型開關的引線顏色默認配置規定如下: If there is both an additional specifiction code and a conductor color code, the conductor color code comes after the additional specifiction code. Note: The default lead color configuration of the wire type switch is as follows: 公共端引線COM: 黑色 Common terminal wire COM: black 常閉端引線NC: 紅色 Normally closed terminal wire NC: red 常開端引線NO: 白色 Normally opened terminal wire NO:white	顏色 Color	紅	白	藍	黑	綠	黃	灰	紫	代號 Code	R	W	L	B	G	M	H	P
顏色 Color	紅			白	藍	黑	綠	黃	灰	紫											
代號 Code	R			W	L	B	G	M	H	P											
5 动作力 (max) Operating force	200:2N 150:1.5N 120:0.7N-1.2N																				
6 安裝構造 Mounting construction	L:左1固定銷Left 1dowel pin R:右1固定銷Right 1dowel pin A:雙面各1固定銷Each 2 for double sides dowel pin B:螺釘孔(+定位銷) DL:左2固定銷Left 2dowel pin DR:右2固定銷Right 2dowel pin C:雙面各2固定銷Each 2for double sides dowel pin W:無孔無銷Without hole and pin																				
7 導線式端子的 導線長度(毫米數) Wire length of wire type terminal(mm)	非導線型該位置空缺 Vacant for non-wire type																				

◆ 内部构造图 Internal configuration drawing



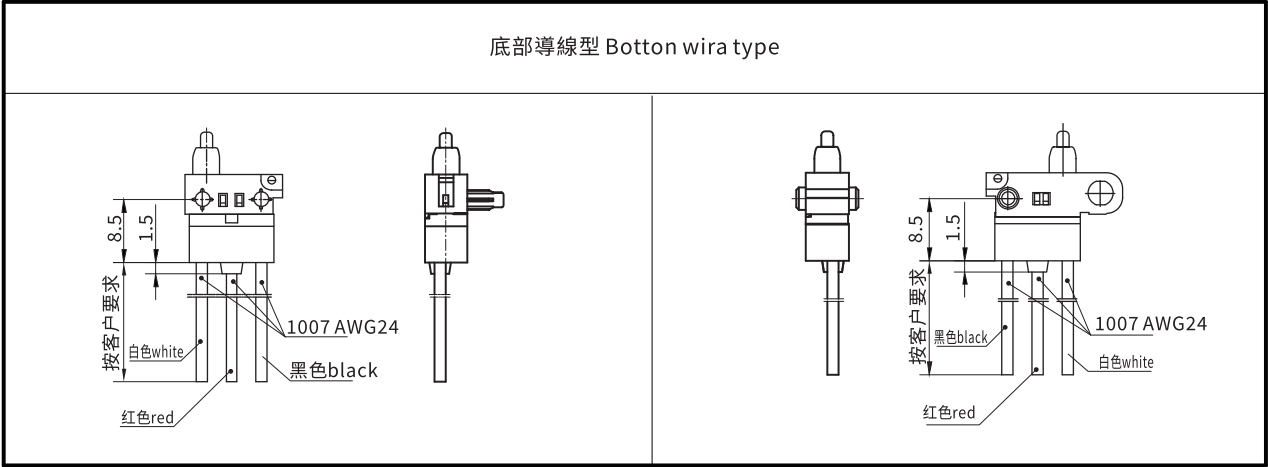
◆ 接触形式说明图 Circuit illustration

	轉換式PDT	常開式PST-NO	常閉式 SPST-NC

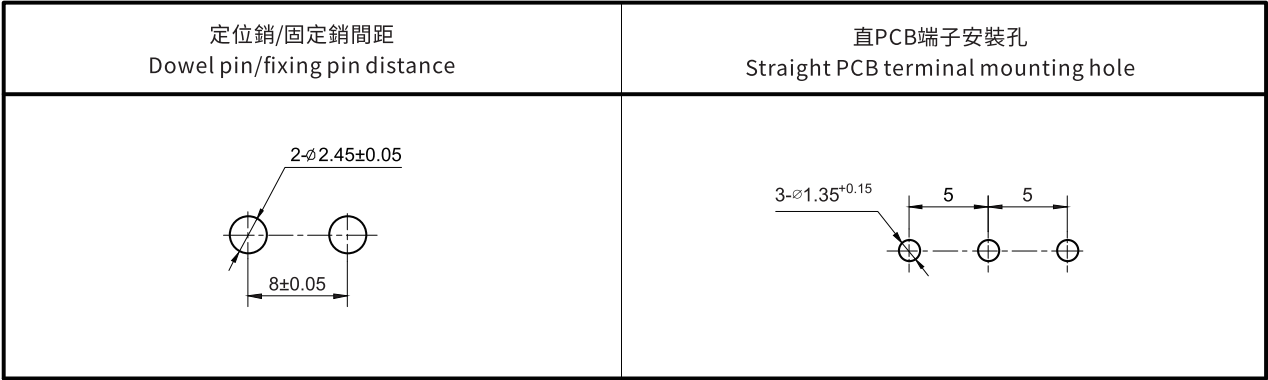
◆ 接線端尺寸 Terminal dimensions

焊接端子 Solder terminal	PCB端子 PCB terminal

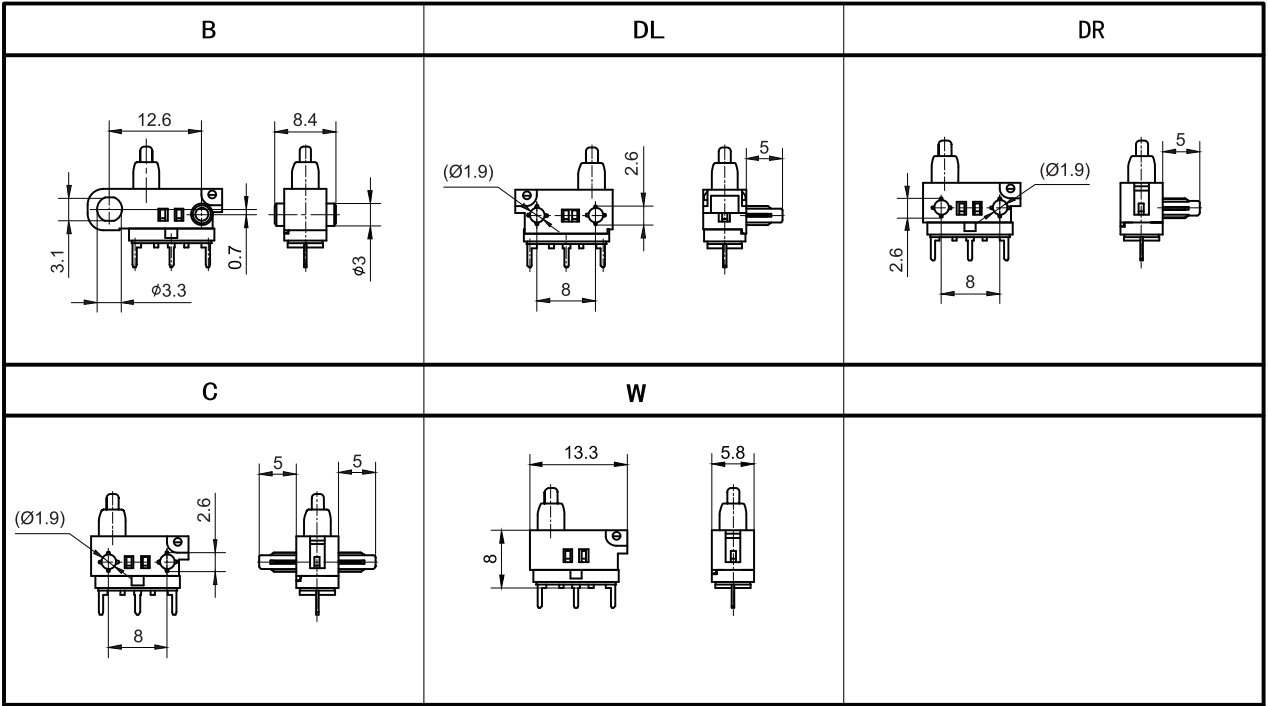
◆ 導線型外形圖 Outline drawing of wire type



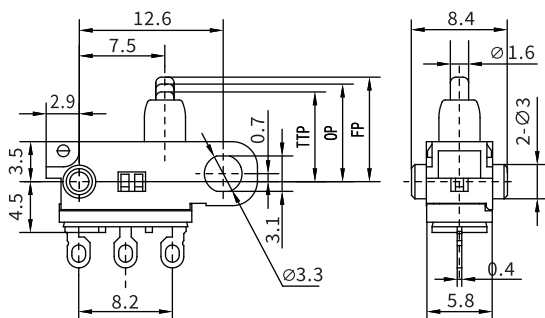
◆ 安裝孔尺寸 Mounting hole dimension



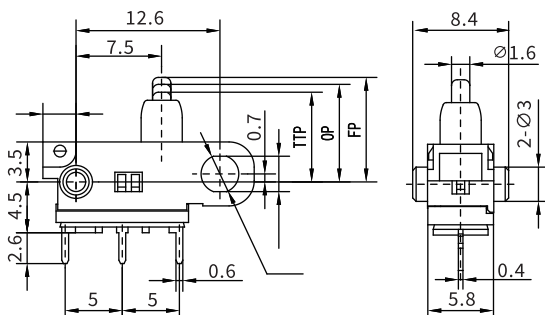
◆ 安裝構造說明圖 Mounting construction illustration



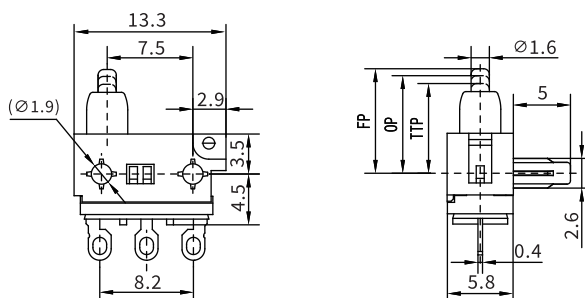
◆ 外形尺寸和動作特性 Dimensions and operating characteristics



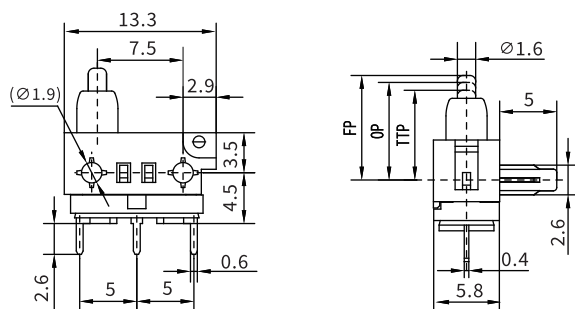
型號Model	WS11-Z0-F100B
OF (N)	1 ± 0.5
OP (mm)	8.45 ± 0.3
TTP Min(mm)	6.15
FP Max(mm)	9.3



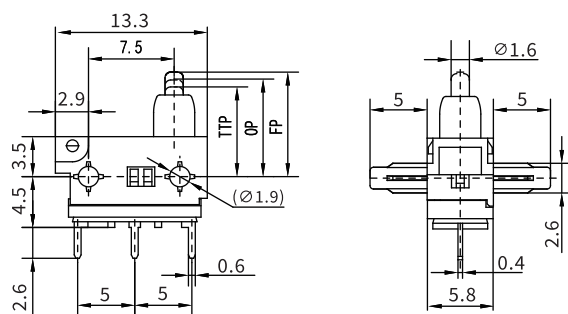
型號Model	WS11-Z0-P100B
OF (N)	1 ± 0.5
OP (mm)	8.45 ± 0.3
TTP Min(mm)	6.15
FP Max(mm)	9.3



型號Model	WS11-Z0-F100DR
OF (N)	1 ± 0.5
OP (mm)	8.45 ± 0.3
TTP Min(mm)	6.15
FP Max(mm)	9.3



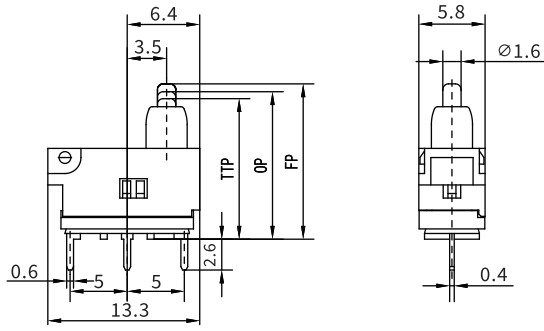
型號Model	WS11-Z0-P100DR
OF (N)	1 ± 0.5
OP (mm)	8.45 ± 0.3
TTP Min(mm)	6.15
FP Max(mm)	9.3



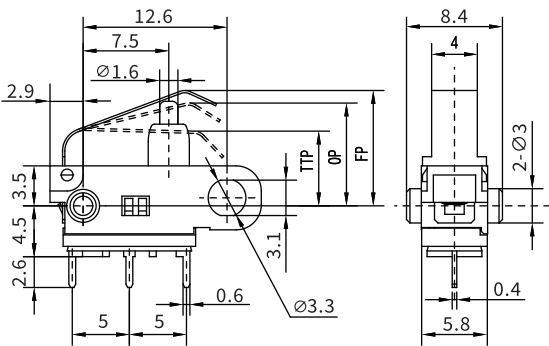
型號Model	WS11-Z0-P100C
OF (N)	1 ± 0.5
OP (mm)	8.45 ± 0.3
TTP Min(mm)	6.15
FP Max(mm)	9.3

WS11

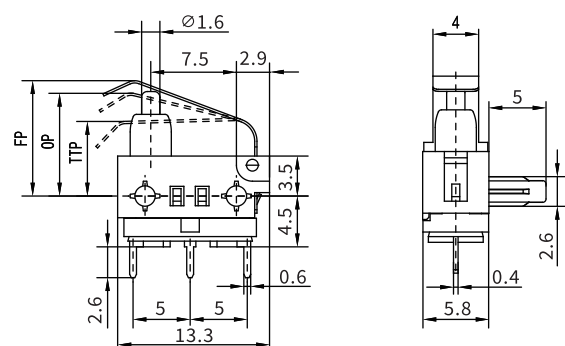
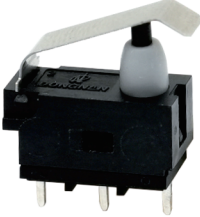
◆ 外形尺寸和动作特性 Dimensions and operating characteristics



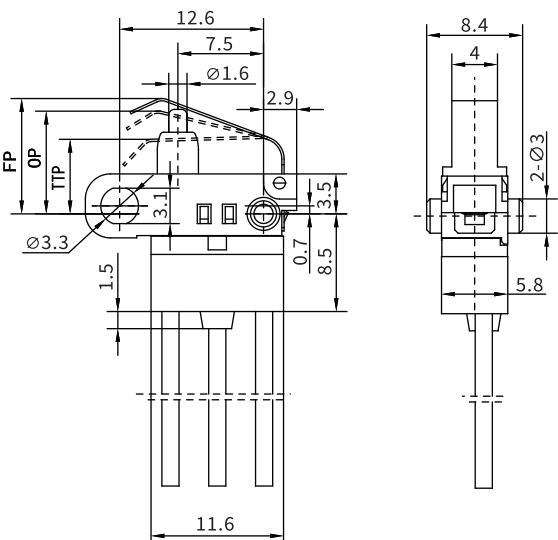
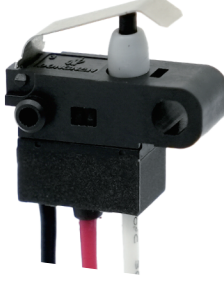
型號Model	WS11-Z0-P100W
OF (N)	1 ± 0.5
OP (mm)	12.95 ± 0.3
TTP Min(mm)	10.65
FP Max(mm)	13.8



型號Model	WS11-ZA-P300B
OF (N)	3Max
OP (mm)	9 ± 0.6
TTP Min(mm)	6.2
FP Max(mm)	10.5



型號Model	WS11-ZA-P300DR
OF (N)	3Max
OP (mm)	9 ± 0.6
TTP Min(mm)	6.2
FP Max(mm)	10.3



型號Model	WS11-ZA-B300B
OF (N)	3Max
OP (mm)	9 ± 0.6
TTP Min(mm)	6.2
FP Max(mm)	10.3