

WS3型防水開關系列 Waterproof switch series

◆ 特點和用途 Characteristics and usage

- 通過橡膠密封圈和環氧樹脂填封達到穩定的密封性。可以在會淋水或多塵埃的地方使用。

To be stably sealed by sealed rubber ring and epoxy resin. Can be used in wet or dusty places.

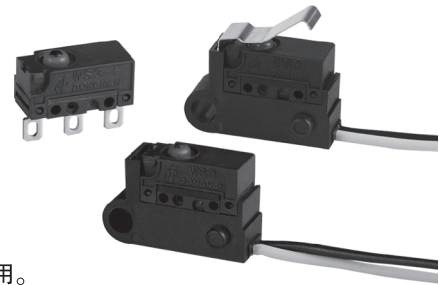
- 配備焊接端子、PCB端子和帶導線端子

Provide with solder terminal, PCB terminal and with wire terminal.

- 配備各種形式動臂 A variety of levers

- 可在汽車、農業機械、大型家電、辦公設備等有耐環境性要求的場合使用。

Can be used in environment resistant places and equipment, apparatus outdoors such as automobile, automat, refrigerator, ice machine, bath equipment, water heater and air condition etc.



◆ 技術特性 Technical Characteristics

項目 Item		特性值 Value
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 25 cycles/min
絕緣電阻 Insulation resistance		≥ 100MΩ (500VDC)
接觸電阻 Contact resistance		≤ 50mΩ (不帶導線型 Without wire)
耐電壓 Test voltage	不相接端子間 Between non-continuous terminals	AC600V, 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	AC1500V, 50/60Hz, 1min
抗振動 Vibration resistance		10 ~ 55Hz, 1.5mm 雙振幅 double amplitude
抗衝擊 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 IP50 (端子型 Terminal type) IEC IP67 (導線型 Wire leads type)
壽命 Life		機械 ≥ 100,000次 Mechanical ≥ 100,000 cycles 電氣 ≥ 10,000次 Electrical ≥ 10,000 cycles
安全認證 Safety approvals		UL、CUL、ENEC、DEMKO

微動開關系列
MICRO SWITCH SERIES

KW3A

KW4A

KW4A(S)

KW10

MS1

MS2

MS3

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防水開關系列
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WS1

WS1L

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電源開關系列
POWER SWITCH SERIES

KDC-A11

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其他開關系列
OTHER SWITCH SERIES

SP02

KXZ2

PRS1

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

WS3 □-□□□-□□□-□□-(□)
 1 2 3 4 5 6 7 8 9 10

1 溫度等級 Degree of temperature	無標記 No mark: 40T85	7 安裝孔尺寸代號 Mounting hole dimension code	A:Ø1.2 B:Ø2.3 C:Ø3 L:左側面固定銷 left side fixed pin type R:右側面固定銷 Right side fixed pin type D:雙側面固定銷 Both sides fixed pin type
2 額定值 Ratings	無標記No mark: 2GPA125V/250VAC 2RA125/250VAC 3A30VDC WS3-F: 0.1GPA125V/250VAC 0.1RA125/250VAC 5mA30VDC	8 導線長度 Wire length	用毫米數表示 Indicate with number- "mm"
3 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 (見說明圖See illustration)	9 防護等級 Degree protection provided by enclosure	無標記 No mark: IP50(端子型terminal type) IP67(導線型 wire leads type) IP□□: 其它等級 Other class
4 驅動形式 Actuator forms	0:無動臂 No lever 3:直動臂 Straight lever 5:滾輪動臂 Roller 6:弧形動臂 Arc lever 8:葉片形動臂 Leaf lever L:長行程式驅動 Long stroke type □:非標準動臂 Not standard lever 注:□ 表示非標準動臂的代號 Note:□ Indicate not standard lever.	10 附加規格代號及 導線顏色配置代號 Append specs code and wire color code	適用於apply to: 1) 當開關使用了非標準零件如非標準端子時; When used not standard parts such as not standard terminal. 2) 當顧客有特殊動作特性值或其它要求時; When customer has particular operating value or other requirements. 3) 當導線顏色不是默認的配置顏色時。 When the wire color is not the default color. ■ 附加規格代號用兩位阿拉伯數字表示, 如 01、02、03……在沒有附加規格編號時, 該位置空缺。 Additional spec number shows as 01, 02, 03……If there is no additional numbers, the place is vacant. ■ 導線顏色配置代號:用三個英文字母按COM、NC、NO順序表示; 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:紅-R、白-W、黑-B、綠-G、藍-L、黃-M、灰-H、紫-P)。 Wire color code: indicate with 3 letters, the order is COM、NC、NO; If NO or NC, vacant place shows o. (Color code: red-R, white-W, black-B, green-G, blue-L, yellow-Y, grey-H, purple-P) 示例 example: BWR, BOR, RWO ■ 若同時有附加規格代號和導線顏色配置代號, 則導線顏色配置代號位于附加規格代號之後。 If there are append specs code and wire color code at the same time, then the wire color code should be after the append specs code. 示例 example: 02BWR
5 端子類型 Terminal type	F:焊接端子 Solder terminal P:PCB端子 PCB terminal B:底部導線型 Bottom wire leads type L:左面導線型 Left side wire leads type R:右面導線型 Right side wire leads type Y:非標準端子 Not standard terminal		
6 動作力(max) Operating force	150: 1.5N 200: 2.0N 250: 2.5N 注: 若是非標準動作力, 用此動作力上限值表示。 Note: if it is not standard operating force, indicate with the upper limit.		

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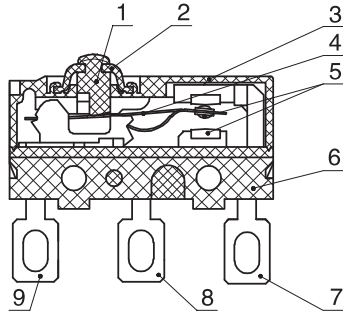
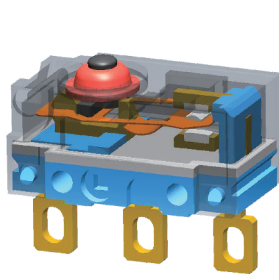
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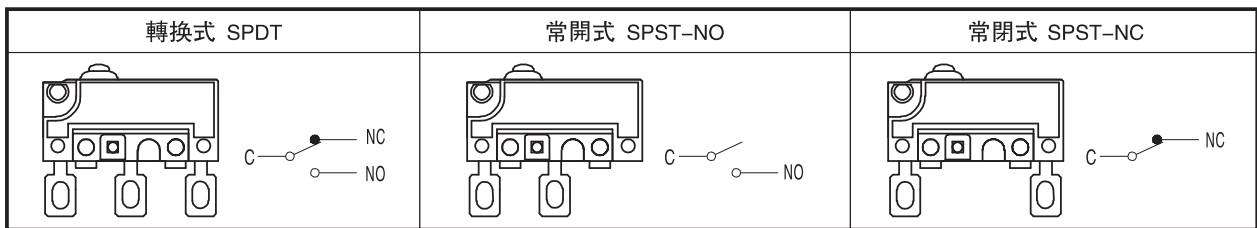
PRS1

◆ 內部構造圖 Internal configuration drawing

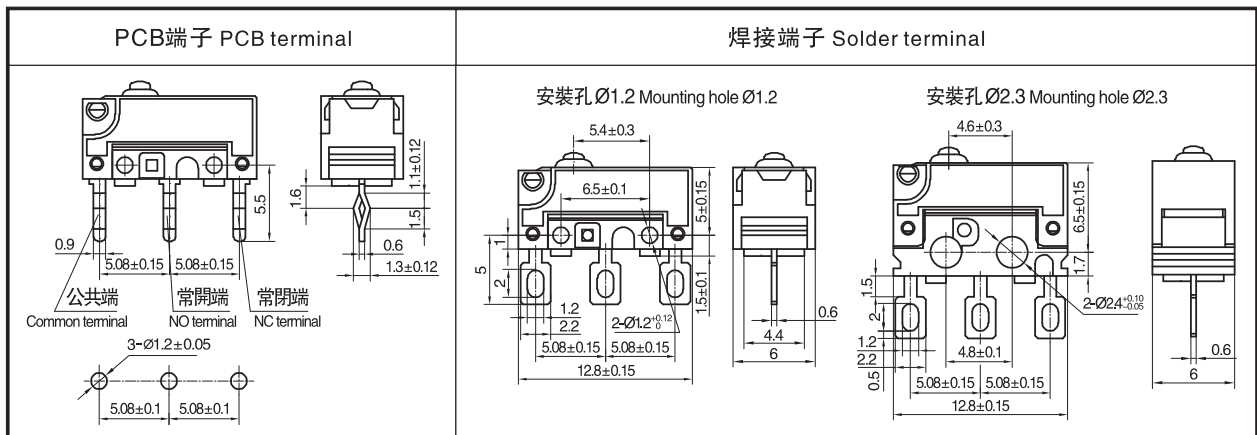


- | | |
|--------|---------------|
| 1 按鈕 | Plunger |
| 2 密封圈 | Hermetic loop |
| 3 蓋 | Cover |
| 4 可動片 | Moving piece |
| 5 電觸點 | Contact |
| 6 底座 | Case |
| 7 常閉端子 | NC terminal |
| 8 常開端子 | NO terminal |
| 9 支架 | Support |

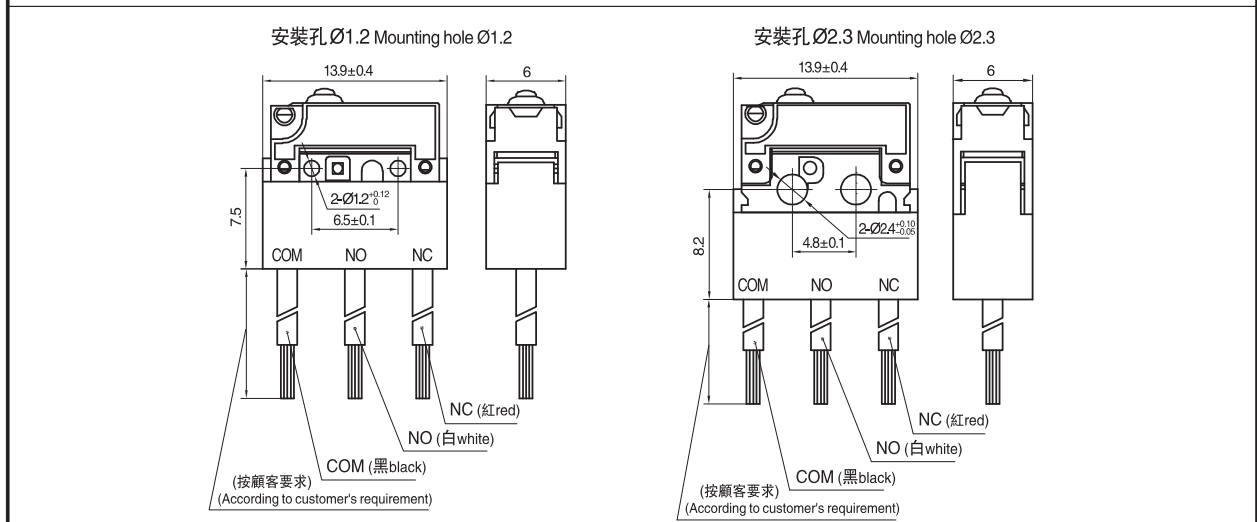
◆ 接觸形式說明圖 Circuit illustration



◆ 端子類型及安裝尺寸說明圖 Terminal types and mounting dimension illustration



底部導線型 Bottom wire leads type



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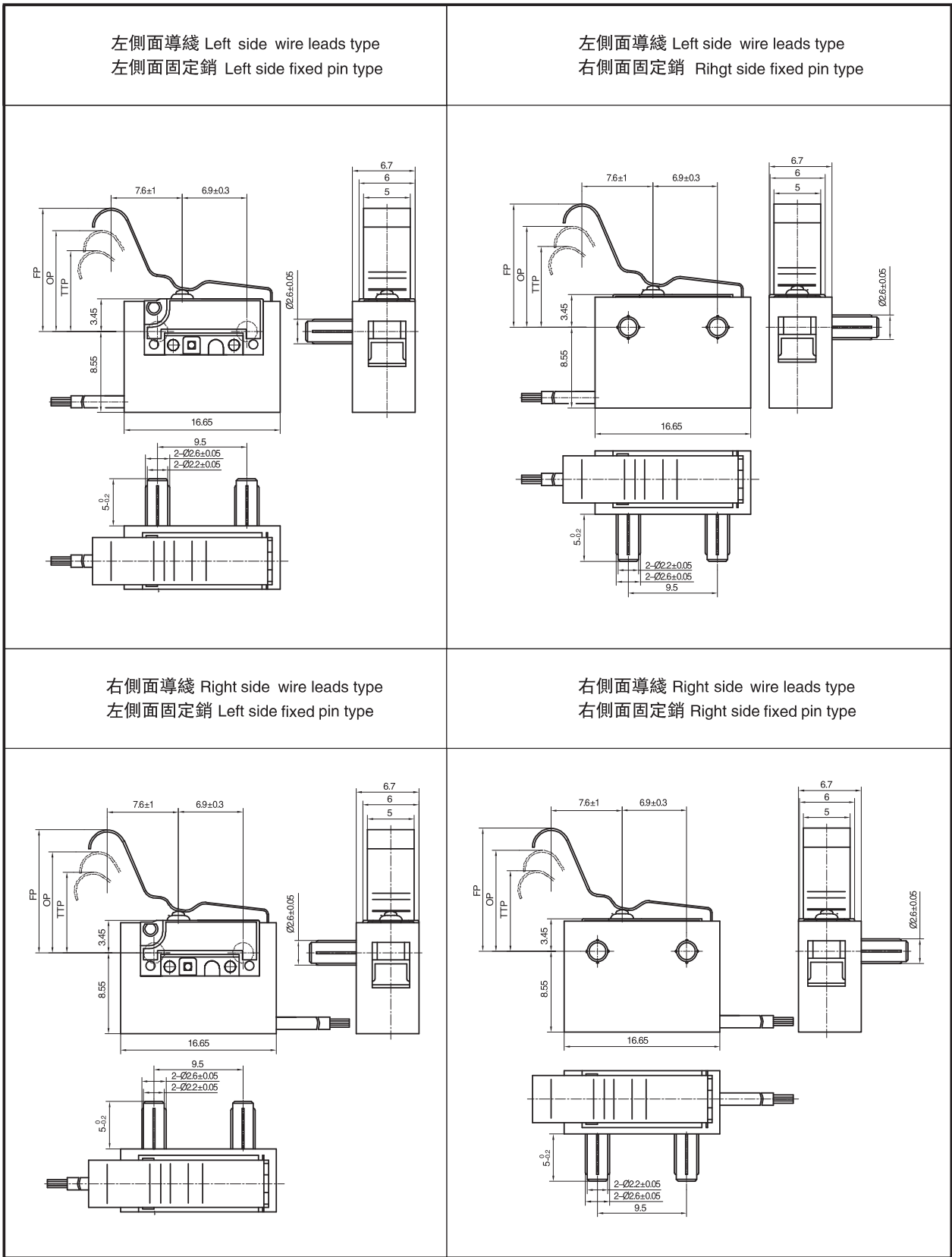
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◆ 端子類型及安裝尺寸說明圖 Terminal types and mounting dimension illustration



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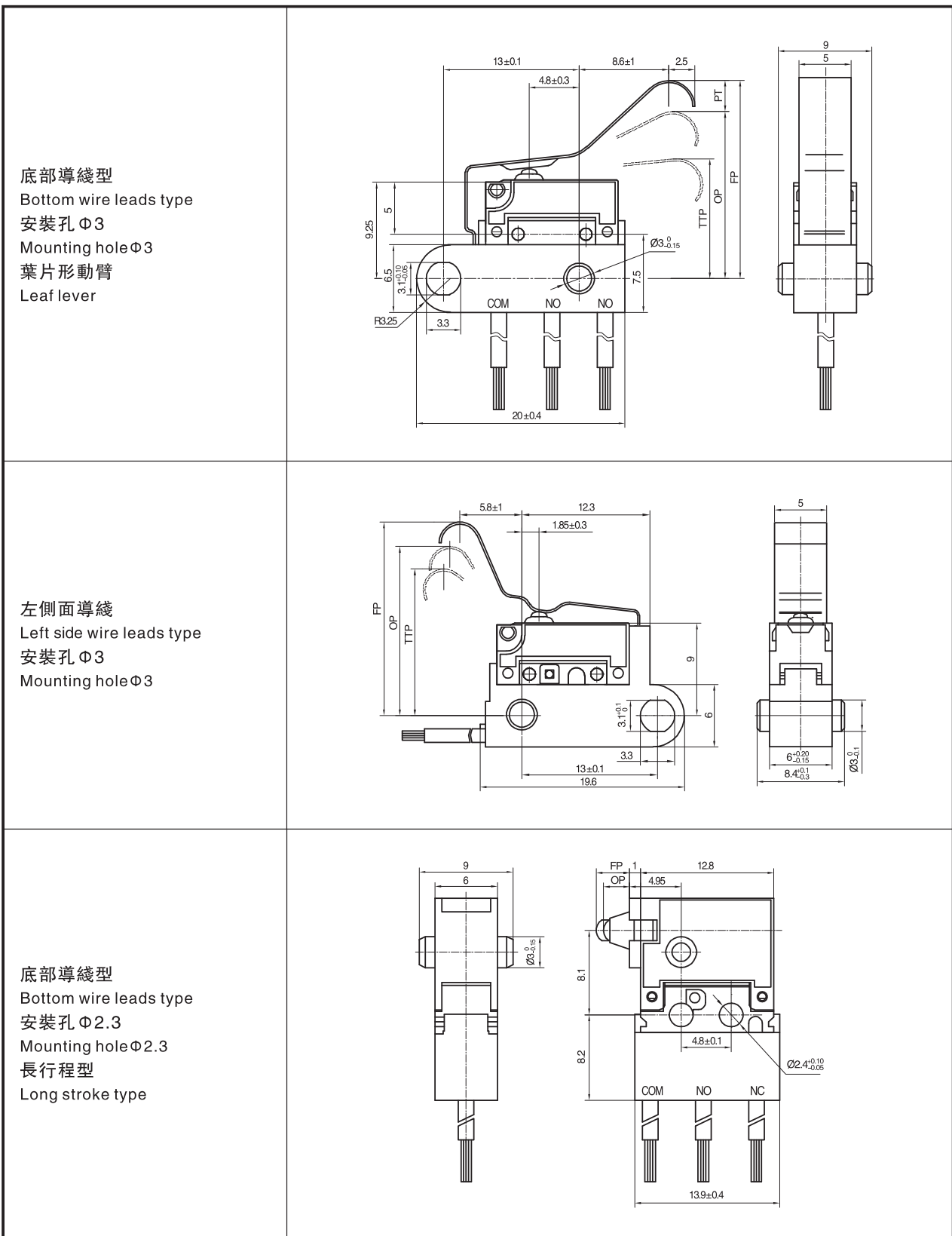
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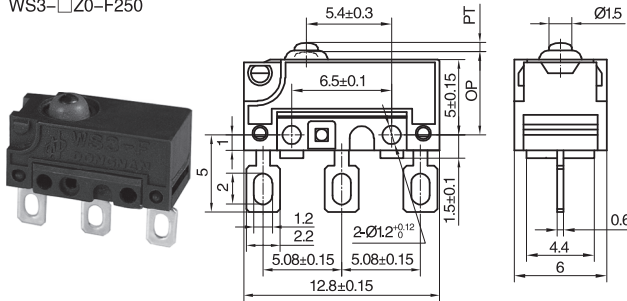
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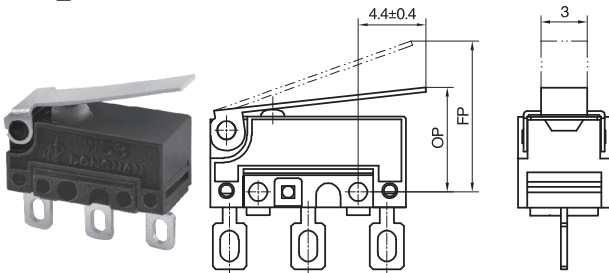
◆ 外形尺寸和動作特性 Dimensions and operating characteristics

WS3-□Z0-F150
WS3-□Z0-F200
WS3-□Z0-F250



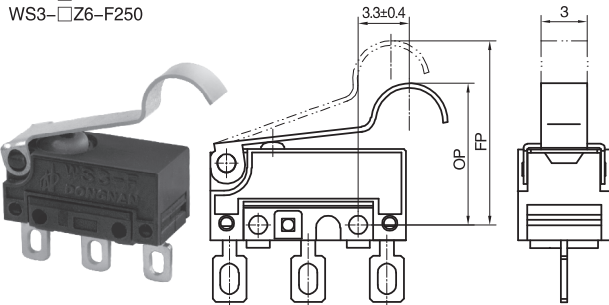
型號 Model	WS3-□Z0-F150	WS3-□Z0-F200	WS3-□Z0-F250
OF Max(N)	1.50	2.00	2.50
RF Min(N)	0.10	0.20	0.30
PT Max(mm)	0.6		
OT Min(mm)	0.2		
MD Max(mm)	0.2		
OP(mm)	5.5 ± 0.3		

WS3-□Z3-F150
WS3-□Z3-F200
WS3-□Z3-F250



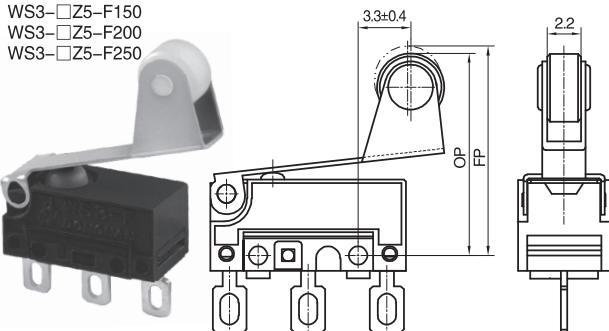
型號 Model	WS3-□Z3-F150	WS3-□Z3-F200	WS3-□Z3-F250
OF Max(N)	0.50	0.80	1.00
RF Min(N)	0.05	0.10	0.15
OT Min(mm)	0.5		
MD Max(mm)	0.6		
FP Max(mm)	11.0		
OP(mm)	6.8 ± 1.2		

WS3-□Z6-F150
WS3-□Z6-F200
WS3-□Z6-F250



型號 Model	WS3-□Z6-F150	WS3-□Z6-F200	WS3-□Z6-F250
OF Max(N)	0.50	0.80	1.00
RF Min(N)	0.05	0.10	0.15
OT Min(mm)	0.5		
MD Max(mm)	0.6		
FP Max(mm)	14.0		
OP(mm)	9.8 ± 1.2		

WS3-□Z5-F150
WS3-□Z5-F200
WS3-□Z5-F250



型號 Model	WS3-□Z5-F150	WS3-□Z5-F200	WS3-□Z5-F250
OF Max(N)	0.50	0.80	1.00
RF Min(N)	0.05	0.10	0.15
OT Min(mm)	0.5		
MD Max(mm)	0.6		
FP Max(mm)	17.0		
OP(mm)	13.1 ± 1.2		

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