

WS6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.

- 開關超行程在2mm以上

Switch over travel more than 2mm

- 滑動觸點的靜音構造

Mute structure of sliding contact

- 接綫端子種類齊全，可配備各種導綫。

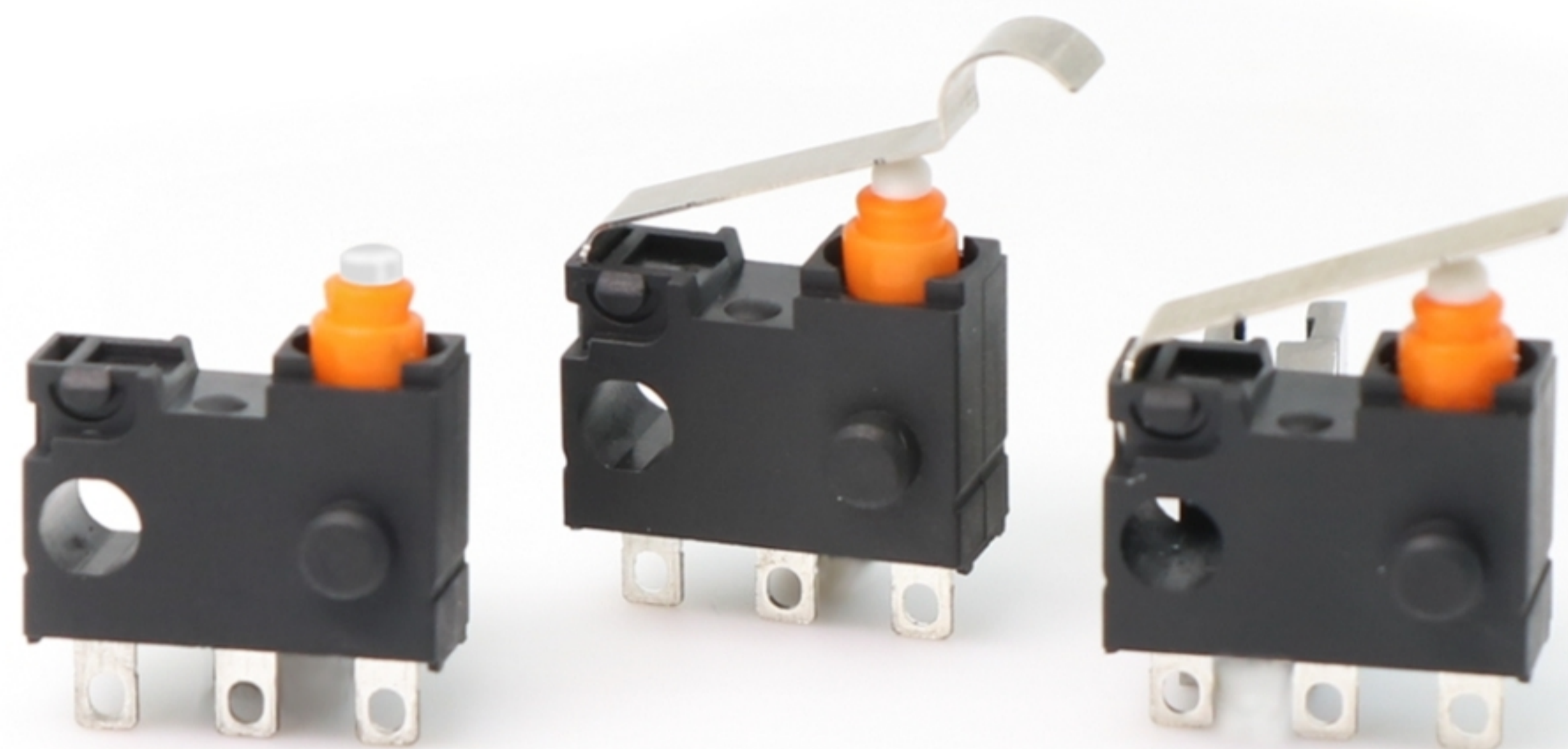
A variety of contact terminals, provide with a variety of wires.

- 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。

It can be used in environmental resistant requirements applications such as automobile, agricultural machine, large home appliances, office equipment etc.



◆ 技術特性 Technical Characteristics

| 項目 Item | 特性值 Value | |
|--|--|------------------------|
| 環境溫度 Environment temperature | -40 ~ +85°C | |
| 工作速度 Operating speed | 30mm ~ 600mm/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 | |
| 絕緣電阻 Insulation resistance | ≥100MΩ (500VDC) | |
| 接觸電阻 Contact resistance | ≤500mΩ | |
| 耐電壓 Test voltage | 同極不相接端子間 Between terminals of the same polarity | AC600V, 50/60Hz, 1min |
| | 帶電金屬零件與地(外殼)之間、接綫端與不帶電金屬件之間 Between current-carrying metal parts and ground(case), and between each terminal and non-current-carrying metal parts. | AC1500V, 50/60Hz, 1min |
| 抗振動 Vibration resistance | 10 ~ 55Hz, 1.5mm雙振幅 double amplitude | |
| 抗衝擊 Shock resistance | 耐久: 1000m/S ² (約100G) 最大 Endurance: 1000m/S ² (approx 100G) max 誤動作: 300m/S ² (約30G) 最大 Wrong action: 300m/S ² (approx.30G) max | |
| 防觸電保護等級 Electric shock proof protection degree | I 級class | |
| 外殼防護等級 Cover protection degree | IEC IP67 (端子型的端子部位除外Except terminal part of terminal type) 或其它等級Or other degrees | |
| 電氣壽命 Electrical Life | ≥500,000次cycles (1mADC5V, 50mADC16V) ≥200,000次cycles (50mADC 30V) | |

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

WS6□-□ □ □-□ □ □-□ □-□
1 2 3 4 5 6 7 8 9 10

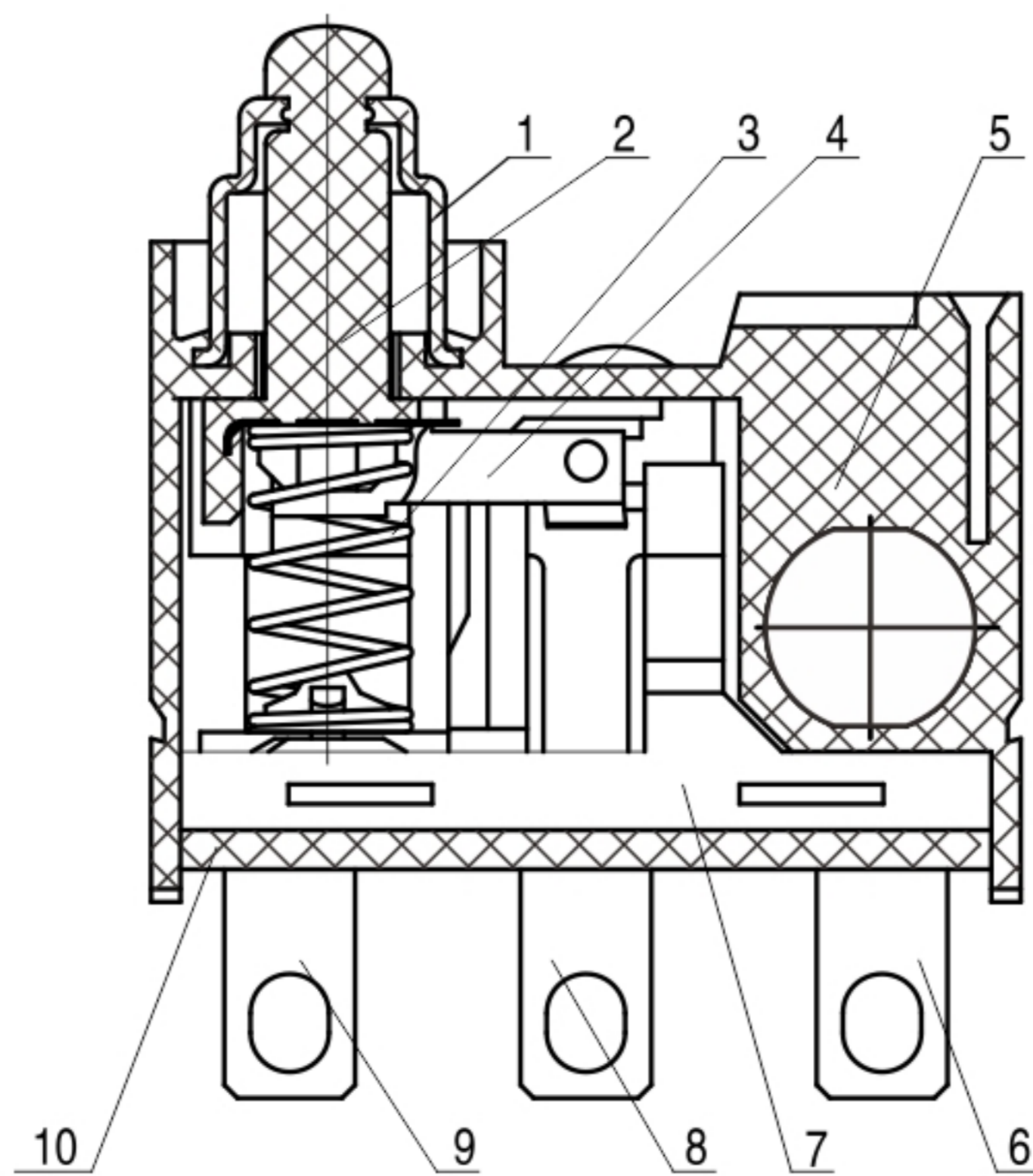
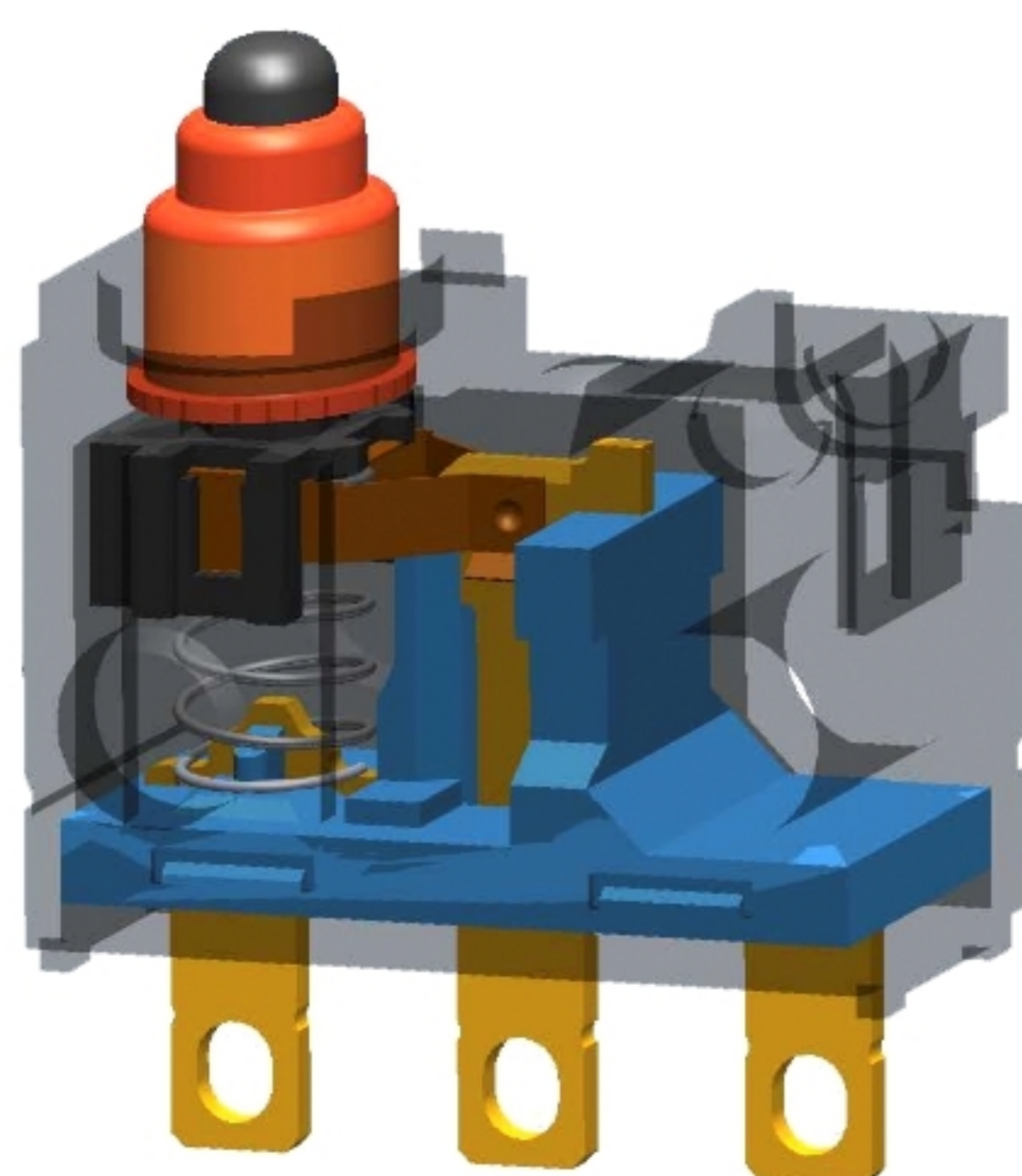
| | | | |
|--|---|---|--|
| 1 溫度等級 Degrees of temperature | 無標記No mark: 40T85 | 6 動作力(max) Operating force | 150: 1.5N 注: 若是非標準動作力, 用此動作力上限值表示。 Note: if it is not standard operating force, indicate with the upper limit. |
| 2 額定值 Rating | 無標記No mark: 1mA 5VDC; 50 mA 16VDC; 100mA30VDC | 7 安裝構造 Mounting construction | A:安裝孔Φ3標準型 Mounting holeΦ3 standard type C:左側面固定銷(僅限F端子) left side fixed pin (only F terminal) D:右側面固定銷(僅限F端子) right side fixed pin(only F terminal) E:左側面定位銷(僅限F端子) Left side dowel pin(only F terminal) F:右側面定位銷(僅限F端子) Right side dowel pin(only F terminal) |
| 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) | 8 導線型端子的導線長度(毫米數) Wire length of wire type terminal (mm) | 非導線型, 該位置空缺。 Vacant for non-wire type |
| 4 驅動形式 Actuator forms | 0:無動臂No lever 3:直動臂Straight lever 6:弧形動臂Arc lever □:非標準動臂Not standard lever 注: 1) □ 表示非標準動臂的代號。 2) 若動臂為內安裝式, 則在動臂代號後加注字母N。 Note: 1) □ Indicate not standard lever. 2) If lever is amoundard inside, add letter "N" after the lever code. | 9 防護等級 protection degree | 無標記No mark: IP67 |
| 5 端子類型 Terminal types | F:焊接端子Solder terminal P:PCB端子PCB terminal PL:左側面PCB端子Left side PCB terminal PR:右側面PCB端子Right side PCB terminal B:底部(向下)導線型Bottom (downward) wire type L:左面導線型(左右的定義見圖示) Left side wire type (definition of right and left is shown in diagram) R:右面導線型 Right side wire type Y:非標準端子Not standard terminal | 10 附加規格代號及導線顏色配置代號 Additional 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 operatingvalue 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. |

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

WS6□-□ □ □-□ □ □-□ □-□
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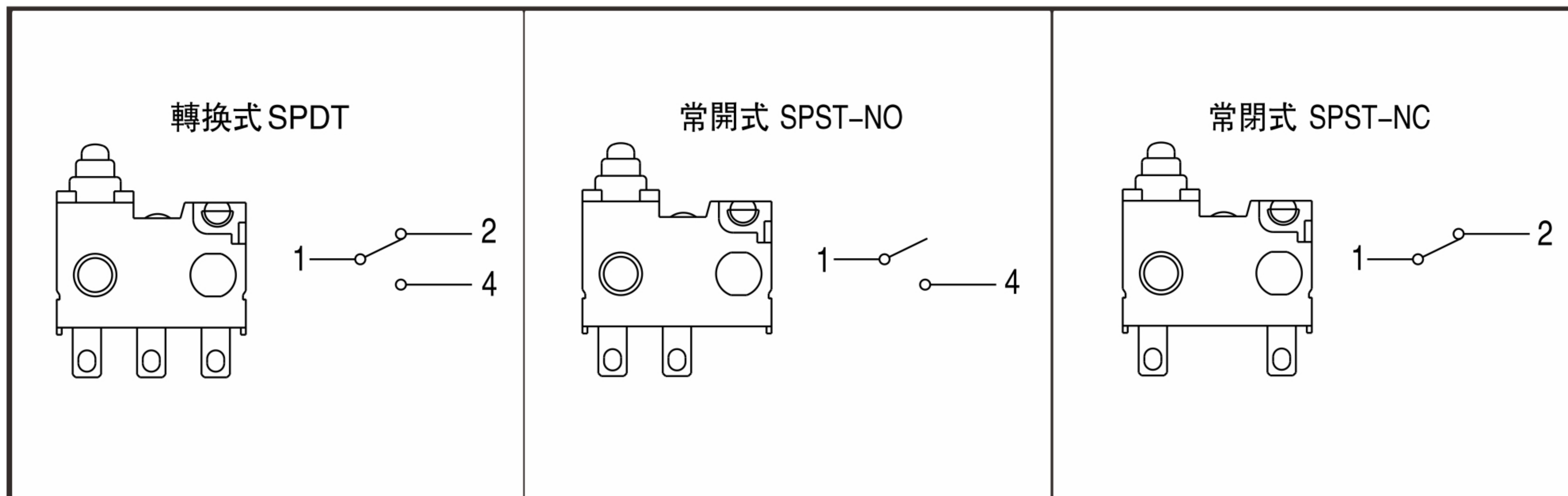
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|--|--|---|--|
| | | <p>10</p> <p>附加規格代號及導線顏色配置代號 Additional specs code and wire color code</p> | <p>■ 導線顏色配置代號：用三個英文字母按COM、NC、NO順序表示；若是常開式或常閉式開關，空缺位置用字母O表示。（顏色代號：紅-R、白-W、黑-B、綠-G、藍-L、黃-M、灰-H、紫-P）。</p> <p>Wire color code: indicate with 3 letters, the order is COM、NC、NO; If NO or NC, vacant place shows 0. (Color code: red-R, white-W, black-B, green-G, blue-L, yellow-Y, grey-H, purple-P)</p> <p>示例example: BWR, BOR, RWO</p> <p>■ 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於附加規格代號之後。</p> <p>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.</p> <p>示例example: 02BWR</p> <p>■ 導線型開關的引線顏色默認配置規定如下Wire color of wire type switch is as follows:</p> <p>公共端引線COM: 黑色 Common terminal wire COM: Black</p> <p>常閉端引線NC: 紅色 Normally closed terminal wire NC: Red</p> <p>常開端引線NO: 白色 Normally opened terminal wire NO: White</p> |
|--|--|---|--|

◆ 內部構造圖 Internal configuration drawing

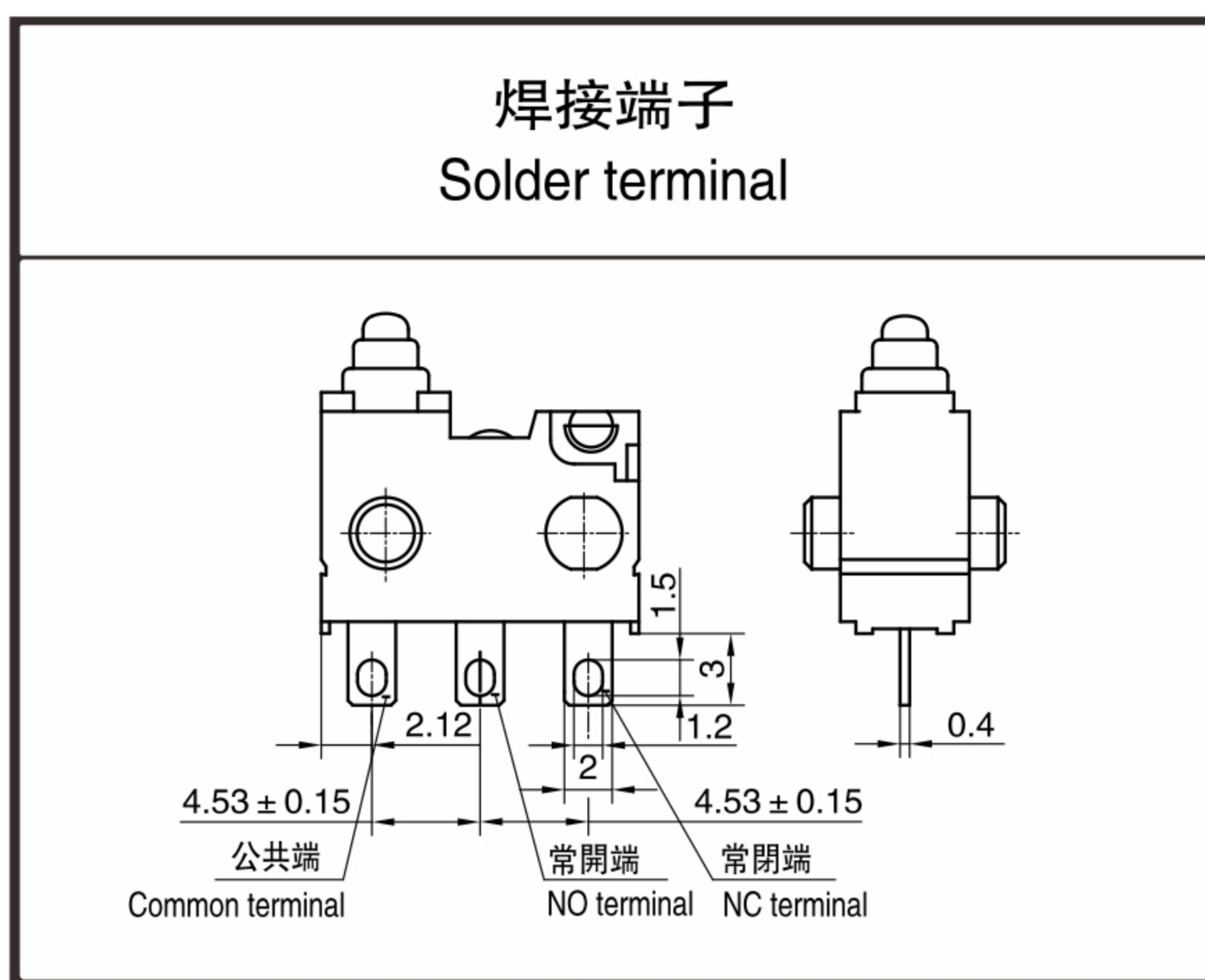


- | | |
|---------|---------------|
| 1 密封圈 | Hermetic loop |
| 2 按鈕 | Plunger |
| 3 彈簧 | Spring |
| 4 簧片 | Spring sheet |
| 5 外殼 | Base |
| 6 常閉端子 | Nc terminal |
| 7 底座 | Case |
| 8 常開端子 | No terminal |
| 9 支架 | Support |
| 10 環氧樹脂 | Epoxide resin |

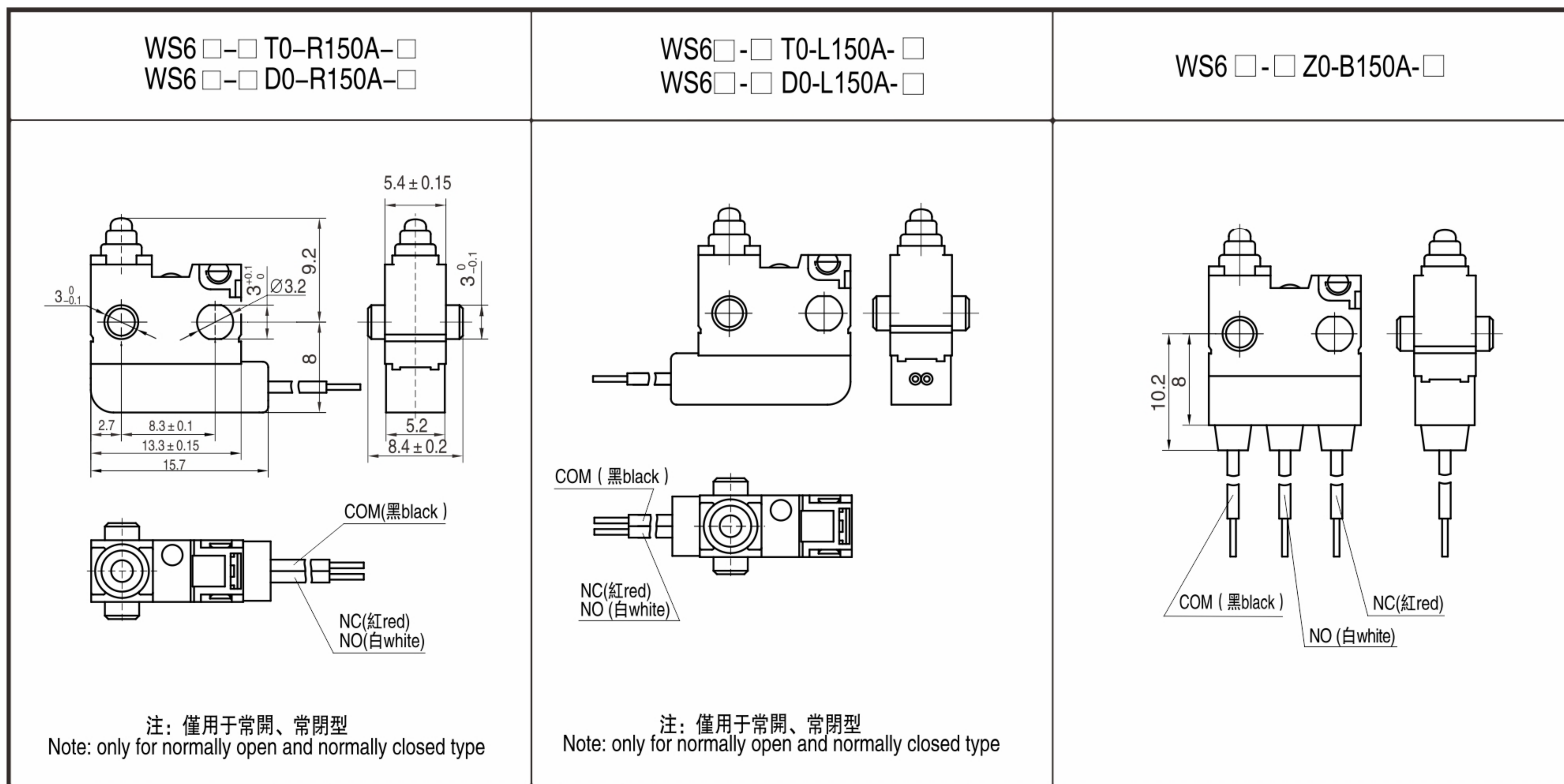
◆ 接觸形式說明圖 Circuit illustration



◆ 接線端尺寸 Terminal dimensions



◆ 導線型外形圖 Outline drawing of wire type

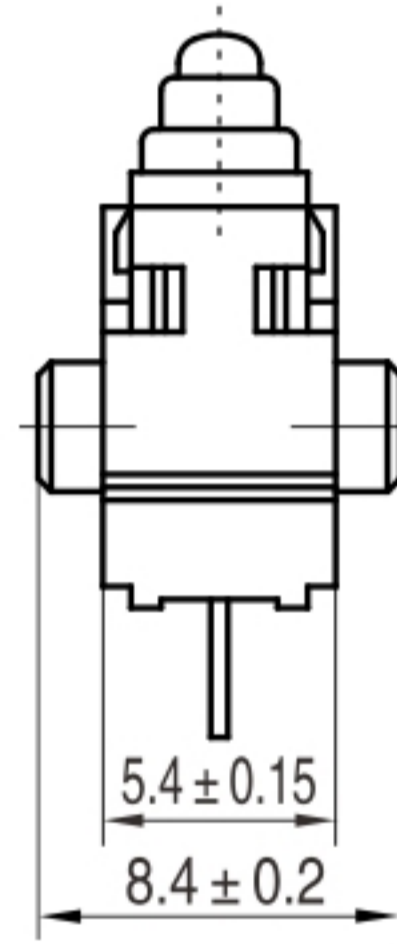
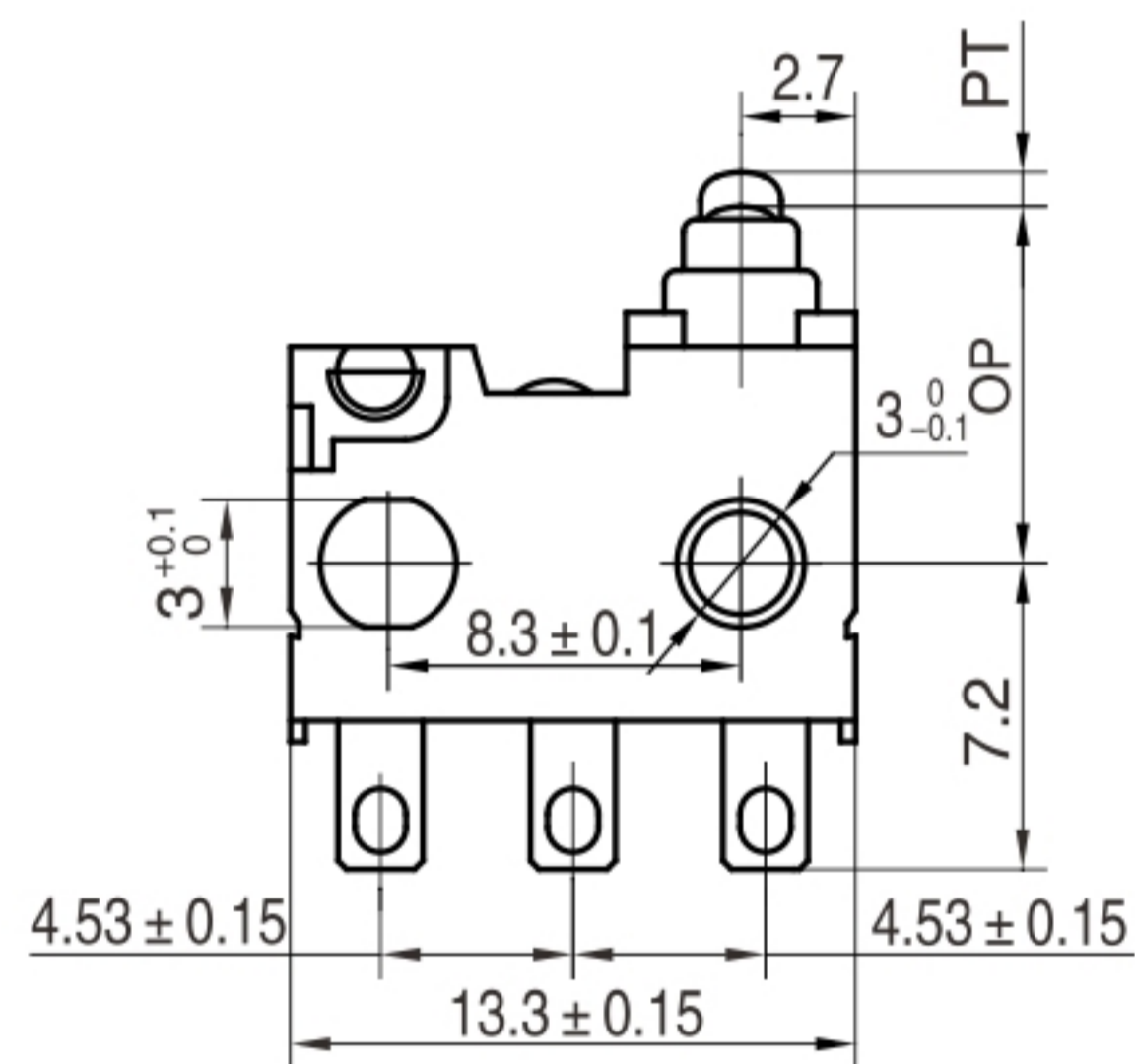


◆ 外殼類型及安裝尺寸說明圖 Illustration of cover type and mounting dimension

| 左側面固定銷 Left side fixed pin | 右側面固定銷 Right side fixed pin | 標準型安裝孔尺寸 Mounting hole dimension |
|----------------------------|-----------------------------|----------------------------------|
| | | |
| 左側面定位銷 Left side dowel pin | 右側面定位銷 Right side dowel pin | |
| | | |

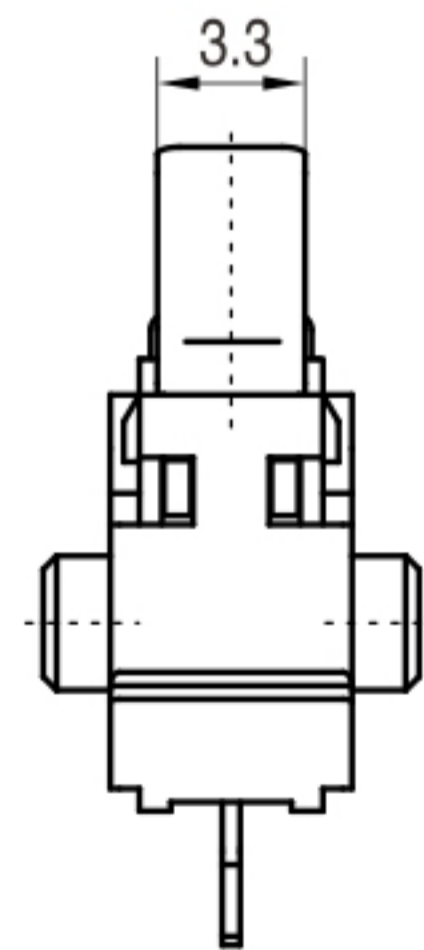
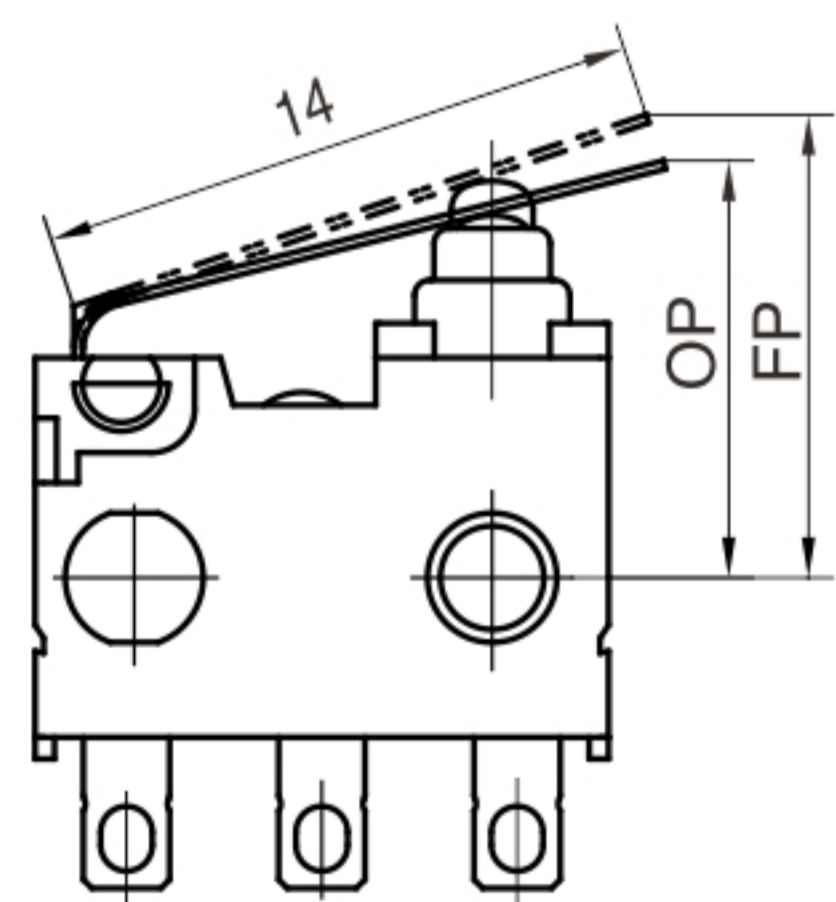
◆ 外形尺寸和動作特性 Dimensions and operating characteristics

WS6-□Z0-F150A



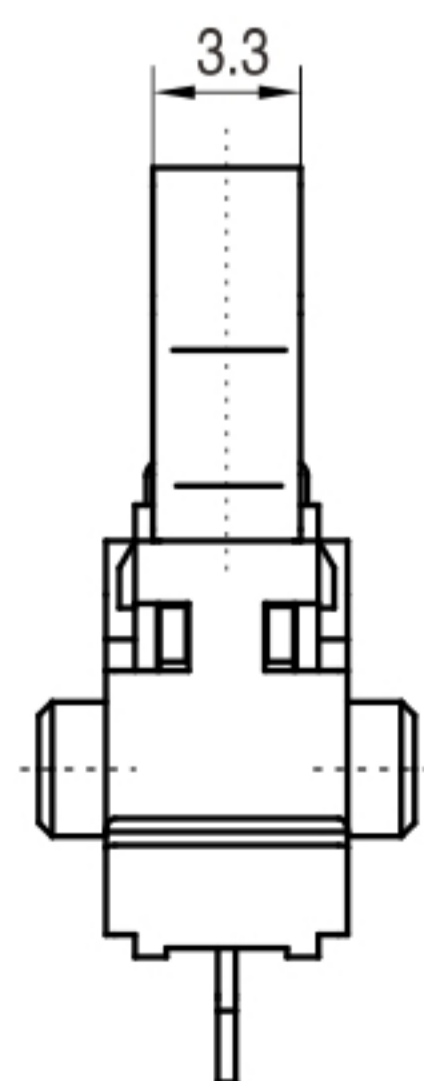
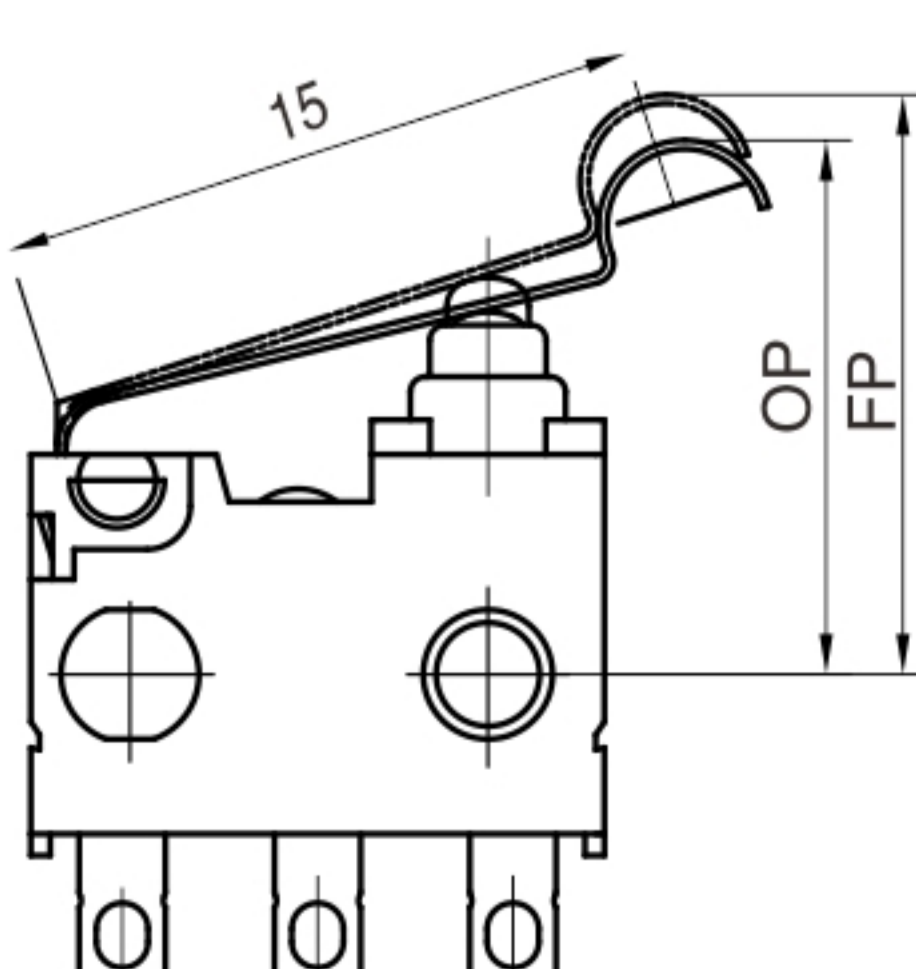
| 型號 Model | WS6-Z0-F150A | |
|------------|--------------|-----------|
| OF Max(N) | 1.5 | |
| PT Max(mm) | 1.1 | |
| NC側 | OP (mm) | 8.7 ± 0.3 |
| | RP (mm) | 8.8 ± 0.3 |
| | OT (mm) | 2.5 |
| NO側 | OP (mm) | 8.4 ± 0.3 |
| | RP (mm) | 8.5 ± 0.3 |
| | OT (mm) | 2.2 |

WS6-□Z3N-F150A



| 型號 Model | WS6-Z3N-F150A | |
|------------|---------------|------------|
| OF Max(N) | 1.7 | |
| FP Max(mm) | 11.5 | |
| NC側 | OP (mm) | 9.8 ± 0.5 |
| | RP (mm) | 10.1 ± 0.5 |
| | OT (mm) | 3.1 |
| NO側 | OP (mm) | 9.3 ± 0.5 |
| | RP (mm) | 9.6 ± 0.5 |
| | OT (mm) | 2.6 |

WS6-□Z6N-F150A



| 型號 Model | WS6-Z6N-F150A | |
|------------|---------------|------------|
| OF Max(N) | 1.5 | |
| FP Max(mm) | 14.4 | |
| NC側 | OP (mm) | 12.5 ± 0.5 |
| | RP (mm) | 12.9 ± 0.5 |
| | OT (mm) | 3.3 |
| NO側 | OP (mm) | 12 ± 0.5 |
| | RP (mm) | 12.4 ± 0.5 |
| | OT (mm) | 2.8 |