

WS8型防水開關系列 Waterproof switch series

◆ 特點和用途 Characteristic and usage

- 業界產品體形最小、防塵、防水。採用雙面滑動接觸結構，接觸可靠、抗衝擊能力強。

Smallest size in micro-switch industry, 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 case 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、引擎蓋和家電中使用。

Can be used in car side doors, trunk, hood and home appliance.



◆ 技術特性 Specifications

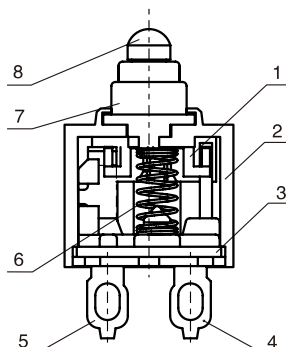
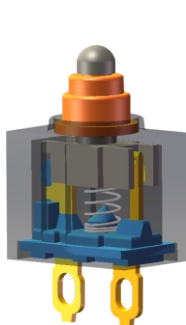
項目 Item		特性值 Value
環境溫度 Environment temperature		-45 ~ +85℃
相對溫度 Relative temperature		95%, 40℃
額定值 Rating		0.1A 12V DC ; 50 μA 5V DC
工作速度 Operating speed		1mm ~ 500mm/s (無動臂時 No lever)
工作頻率 Operating frequency		機械 60次/min; 電氣 25次/min Mechanical 60 cycles/min; Electrical 25cycles/min
絕緣電阻 Insulation resistance		≥ 100MΩ (500VDC)
接觸電阻 Contact resistance		≤ 50MΩ
耐電壓 Test voltage	同極不相接端子間 Between terminals of the same polarity	AC500V, 50/60Hz, 1min
	帶電金屬零件與地(外殼)之間、接線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.	AC500V, 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 degree		I 級 class
外殼防護等級 Cover protection degree		IEC IP67 (不包括外露端子部分) IEC IP67 (except exposed terminals)
電氣壽命 Electrical life		機械 ≥ 300,000次 Mechanical ≥ 300,000cycles 電氣 ≥ 300,000次 Electrical ≥ 300,000cycles
安全認證 Safety approvals		UL, TUV, CQC

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

WS8 - □ - □ □ □ - □ - (□)
1 2 3 4 5 6

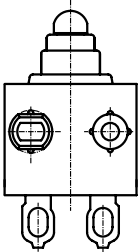
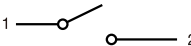
1 接觸形式 Circuit	T:常開(按通)式 SPST-NO D:常閉(按斷)式 SPST-NC (見說明圖 See illustration)	4 安裝構造 Installation structure	C:雙面各有2凸臺 There are 2 convex platform on both sides D:無柱無凸臺,底部4個小腳 No column and no convex platform, 4 small feet at the bottom. (見說明圖See illuminations)																	
2 端子類型 Terminal types	F:焊接端子 Solder terminal P:PCB端子 PCB terminal A:側面端子之一 One of the side terminal B:側面端子之二 The other of the side terminal Y:非標準端子 Non-standard terminal W:導線型 Wire type C:壓入式 (見說明圖See illuminations)		5 導線型端子導線 方向及長度 Direction and length of conductor type terminal D□:導線在開關下方引出; The wire leads out below the switch L□:導線在開關左側引出; The wire leads out to the left of the switch R□:導線在開關右側引出。 The wire leads out to the right of the switch (□為導線長度毫米數) (□shows the wire lenth mm)																	
3 動作力(MAX) Operating force	150: 1.5N (0.5N—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.	6 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: ■ 表示有特殊要求, 如非標準端子, 特殊的動作特性值等。用二位阿拉伯數字表示。 ■ indicates that there are special requirements, such as not standard terminals and special operation characteristic values, which are shows as two Arabic numerals. ■ 導線配置為非默認顏色: 用二個英文字母按NC、NO順序表示導線顏色配置 (顏色代號見表1) ■ Non-default color for the wire configuration: shows as two letters NC.NO to indicate the wire color configuration (see sheet 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>	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												
4 安裝構造 Installation structure	A:單面有2固定柱 There are 2 fixed columns on one side. B:無柱無凸臺 No column and no convex platform.	導線型開關的引線顏色默認配置規格如下: The insidious color of wire type switches is configured as follows 常閉端引線NC: X色 (待定)To be determined 常開端引線NO: X色 (待定)To be determined ■ 若同時有附加規格代號和導線顏色代號, 則導線顏色代號位于附加規格代號之後。 If both additional specification code and wire color code exist, the wire color code comes after the additional specification code																		

◆ 內部構造圖 Internal configuration drawing

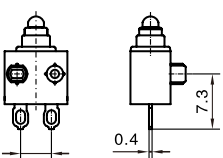
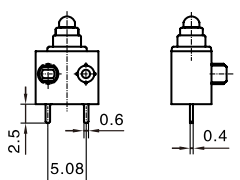
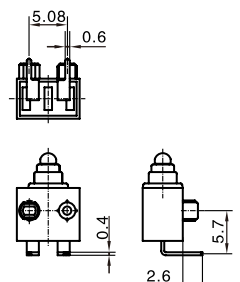
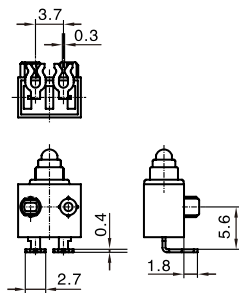


- | | |
|------------|-------------------------|
| 1: 可動片 | Moving piece |
| 2: 外殼 | Base |
| 3: 底座 | Case |
| 4: 端子 | Terminal |
| 5: 常開/常閉端子 | NO terminal/NC terminal |
| 6: 彈簧 | Spring |
| 7: 密封圈 | Hermetic loop |
| 8: 按鈕 | NO terminal |

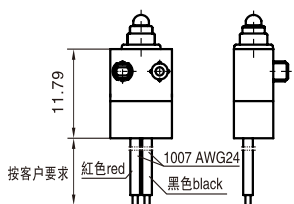
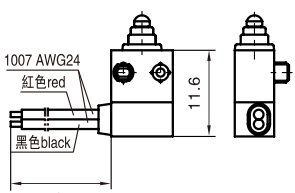
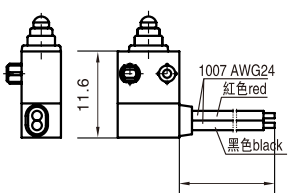
◆ 接觸形式說明圖 Circuit illustration

	常開式 SPST-NO	常閉式 SPST-NC
		

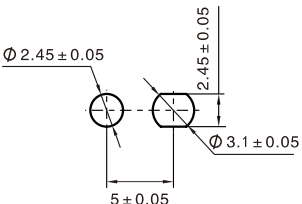
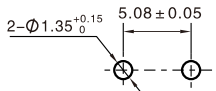
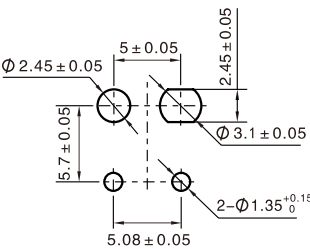
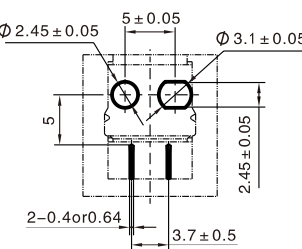
◆ 接線端尺寸 Terminal dimensions

焊接端子 Solder terminal	PCB端子 PCB terminal		壓入式端子 Press fit terminal
			

◆ 導線型外形圖 Outline drawing of wire type

D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
 按客戶要求 According to customer's requirements	 按客戶要求 According to customer's requirements	 按客戶要求 According to customer's requirements

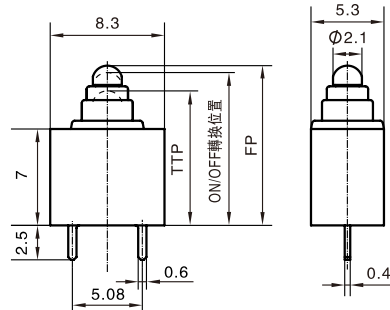
◆ 安裝孔尺寸 Mounting hole dimensions

定位銷/固定銷間距 Dowel pin/fixing pin distance	直PCB端子安裝孔 Straight PCB terminal mounting hole	左右PCB端子安裝孔 Left and right PCB terminal mounting hole	壓入式安裝孔 Press fit mounting hole
			

WS8-T/D-F150A

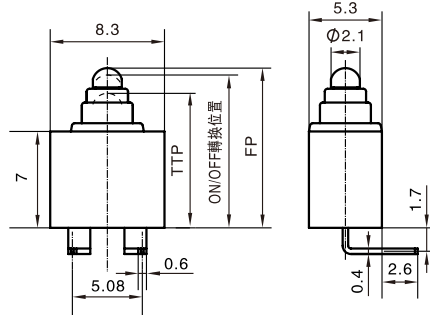
◆ 外形尺寸和動作特性 Dimensions and operating characteristics

WS8-T/D-P150B



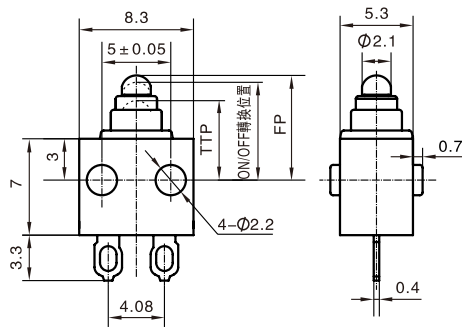
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OF Max(N)	1.50
ON/OFF 轉換位置(mm)	11.1 ± 0.2
TTP Min(mm)	9.4
FP Max(mm)	11.9

WS8-T/D-A150B



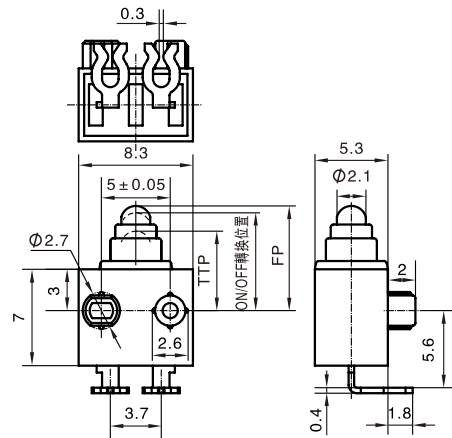
型號 Model	WS8-T/D-A150B
OF Max(N)	1.50
ON/OFF 轉換位置(mm)	11.1 ± 0.2
TTP Min(mm)	9.4
FP Max(mm)	11.9

WS8-T/D-F150C



型號 Model	WS8-T/D-F150C
OF Max(N)	1.50
ON/OFF 轉換位置(mm)	7.1 ± 0.2
TTP Min(mm)	5.4
FP Max(mm)	7.9

WS8-T/D-B150A



型號 Model	WS8-T/D-B150A
OF Max(N)	1.50
ON/OFF 轉換位置(mm)	7.1 ± 0.2
TTP Min(mm)	5.4
FP Max(mm)	7.9