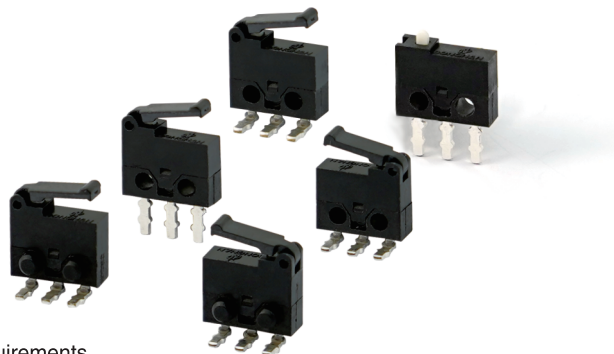


MS12型微動開關系列 Micro switch series

◆ 特點和用途 Characteristic and usage

- 體形超級小型，結構緊湊，具備良好的電氣性能。
Super small size, compact structure, with good electrical performance.
- 可垂直和水平安裝在印制電路板上
Can be installed vertically and horizontally on the printed circuit board
- 可選有無動臂型
Whether with lever is both available
- 可用于安裝空間極其有限和高可靠性要求的應用場合
Suitable for applications with limited installation space and high reliability requirements



◆ 技術特性 Specifications

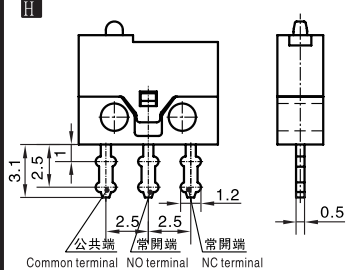
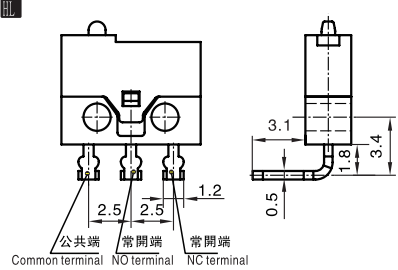
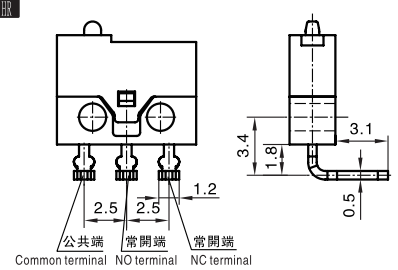
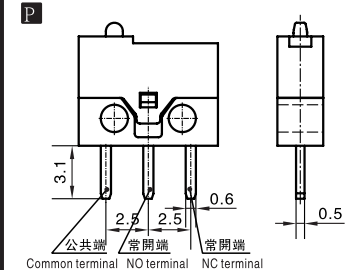
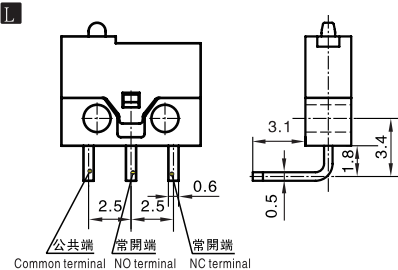
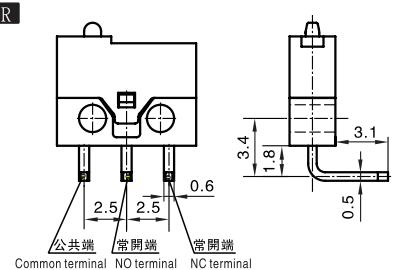
項目 Item		特性值 Value
工作速度 Operating speed		0.1mm ~ 0.5m/s (無動臂時 No lever)
工作頻率 Operating frequency		機械 60次/min; 電氣 30次/min Mechanical 60 cycles/min; Electrical 30cycles/min
絕緣電阻 Insulation resistance		$\geq 100\text{m}\Omega$ (500VDC)
接觸電阻 Contact resistance		$\leq 100\text{m}\Omega$
耐電壓 Test voltage	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.	AC500V, 50/60Hz, 1min
抗振動 Vibration resistance		10 ~ 55Hz, 1.5mm 雙振幅 Double amplitude
抗衝擊 Shock resistance		耐久endurance: 200m/ (約10G approx.10G)max 誤動作Wrong action: 100m/s ² (約10G approx.10G)max
使用環境溫度 Ambient operation temperature		-25℃ to + 85℃ 60%環境以下 (無結冰、無凝露) -25℃ to + 85℃ At ambient humidity of 60% max. (with no icing or condensation)
使用環境濕度 Ambient operation humidity		35% to 85% RH (for +5℃ to + 35)
外殼防護等級 Cover protection degree		IEC IP40
壽命 Life		機械 $\geq 50,000$ 次 Mechanical $\geq 50,000$ cycles 電氣 $\geq 30,000$ 次 Electrical $\geq 30,000$ cycles
重量 Weight		約0.3g Approx. 0.3g

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

MS12-□□□-□□-(□)
 1 2 3 4 5 6

1 額定值 Ratings	A: 50~500mA 30VDC 3E4 25T70(默認銀觸點) (Default silver contact) B: 5~50mA 30VDC 3E4 25T70(默認鍍金觸點) (Default gold plated contact)	4 端子類型 Terminal types	L: 左側面PCB端子 Left side PCB terminal R: 右側面PCB端子 Right side PCB terminal Y: 非標準端子Not standard terminal
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 (見說明圖 See illustration)	5 動作力(MAX) Operating force	050: 0.5N 100: 1.0N 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.
3 驅動形式 Actuator forms	0: 無動臂 No lever 1: 短動臂 Short lever	6 附加規格代號 Additional specs code	附加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 by two Arabic numerals such as 01, 02, 03…… If there is no additional numbers, the place is vacant.
4 端子類型 Terminal types	H: 焊接端子 Solder terminal HL: 左側面焊接端子 Left side solder terminal HR: 右側面焊接端子 Right side solder terminal P: PCB端子 PCB terminal		

◆ 接線端尺寸 Terminal dimensions

焊接端子 Solder terminal	左側面焊接端子 Left side solder terminal	右側面焊接端子 Right side solder terminal
H 	HL 	HR 
PCB端子 PCB terminal	左側面PCB端子 Left side PCB terminal	右側面PCB端子 Right side PCB terminal
P 	L 	R 

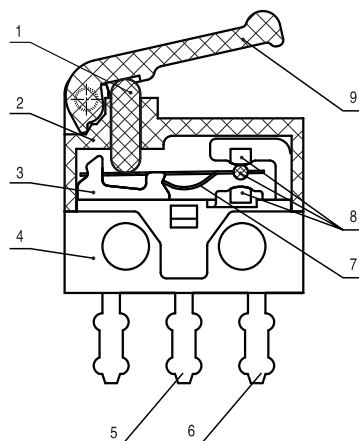
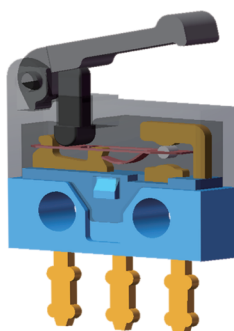
◆ 安裝孔尺寸 Mounting hole dimensions

	PCB端子 PCB terminal	左側面PCB端子 Left side PCB terminal	右側面PCB端子 Right side PCB terminal

◆ 接觸形式說明圖 Circuit illustration

轉換式 SPDT	常開式 SPST-NO	常閉式 SPST-NC

◆ 內部構造圖 Internal configuration drawing

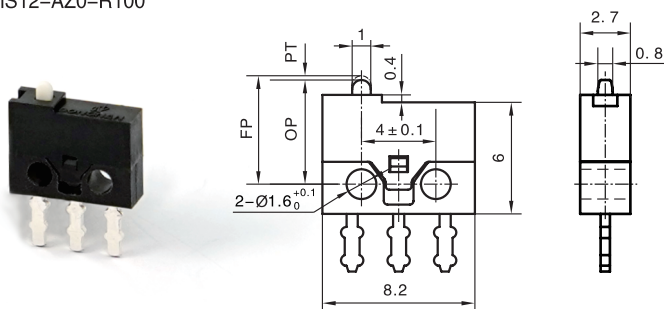


- | | |
|---------|--------------|
| 1: 按鈕 | Plunger |
| 2: 蓋 | Cover |
| 3: 支架 | Support |
| 4: 底座 | Case |
| 5: 常開端子 | NO terminal |
| 6: 常閉端子 | NC terminal |
| 7: 可動片 | Moving piece |
| 8: 電觸點 | Contact |
| 9: 動臂 | Lever |

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

按鈕型 Pin Plunger Models

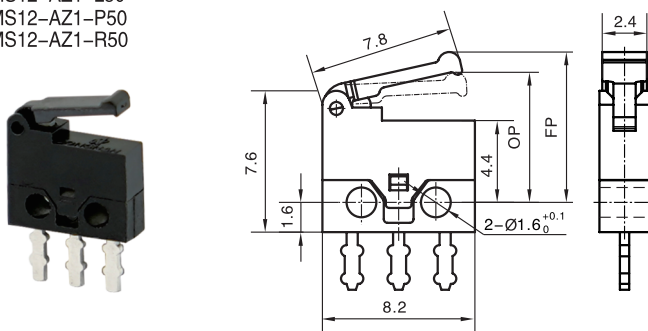
MS12-AZ0-H100
MS12-AZ0-HL100
MS12-AZ0-HR100
MS12-AZ0-L100
MS12-AZ0-P100
MS12-AZ0-R100



OF Max(N)	1.0
RF Min(N)	0.2
PT Max(mm)	0.4
OT Min(mm)	0.1
MD Max(mm)	0.1
OP(mm)	5.7 ± 0.2

動臂型 Lever Models

MS12-AZ1-H50
MS12-AZ1-HL50
MS12-AZ1-HR50
MS12-AZ1-L50
MS12-AZ1-P50
MS12-AZ1-R50



OF Max(N)	0.5
RF Min(N)	0.06
PT Max(mm)	1.6
OT Min(mm)	0.3
MD Max(mm)	0.25
FP Max(mm)	8.3
OP(mm)	7.0 ± 0.5