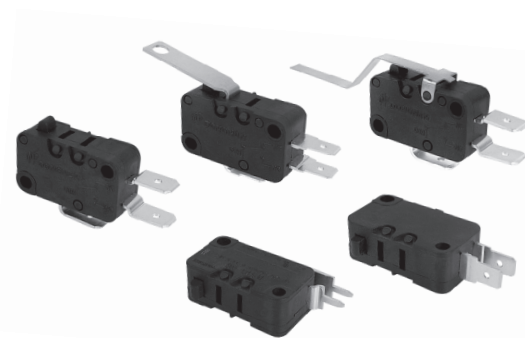


## MS10型微動開關系列 Micro switch series

### ◆ 穩定可靠的微動開關 Stable and reliable micro switch

- 長壽命，高可靠。  
Long life, high reliability.
- 低動作力性能穩定  
Low operating force stable performance
- 接線端子種類齊全  
A variety of contact terminals
- 多種溫度等級  
A variety of temperature class
- 配備各種形式動臂  
A variety of levers



### ◆ 技術特性 Technical Characteristics

項目 Item		特性值 Value
工作速度 Operating speed		0.1mm ~ 1m/s (與驅動方式有關) (related with actuator forms)
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		動作力>0.75N: ≤50mΩ (見注) 動作力≤0.75N: ≤100mΩ (見注) OF>0.75N: ≤50mΩ (See note) OF≤0.75N: ≤100mΩ (See note)
耐電壓 Test voltage	同極不相接端子間 Between terminals of the same polarity	AC1000V, 50/60Hz, 1min
	帶電金屬零件與地(外殼)之間、接線端與不帶電金屬零件之間 Between current-carrying metal parts and ground(case), and between each terminal and non-current-carrying metal parts.	AC3750V, 50/60Hz, 1min
抗振動 Vibration resistance		10 ~ 55Hz, 1.5mm 雙振幅 double amplitude
抗衝擊 Shock resistance		破壞: 動作力>0.5N—1000m/s <sup>2</sup> (約100G)max 動作力≤0.5N—400m/s <sup>2</sup> (約40G)max 故障: 動作力>0.5N—200m/s <sup>2</sup> (約20G)max 動作力≤0.5N—100m/s <sup>2</sup> (約10G)max Destruction: OF>0.5N—1000m/s <sup>2</sup> (approx.100G)max OF≤0.5N—400m/s <sup>2</sup> (approx.40G)max Malfunction: OF>0.5N—200m/s <sup>2</sup> (approx.20G)max OF≤0.5N—100m/s <sup>2</sup> (approx.10G)max
壽命 Life		機械 ≥2,000,000次; Mechanical ≥2,000,000 cycles 電氣 ≥50,000次 Electrical ≥50,000 cycles
質量 Weight		約6g(無動臂型) Approx. 6g(No lever)
安全認證 Safety approvals		UL、CUL、CQC、ENEC、DEMKO

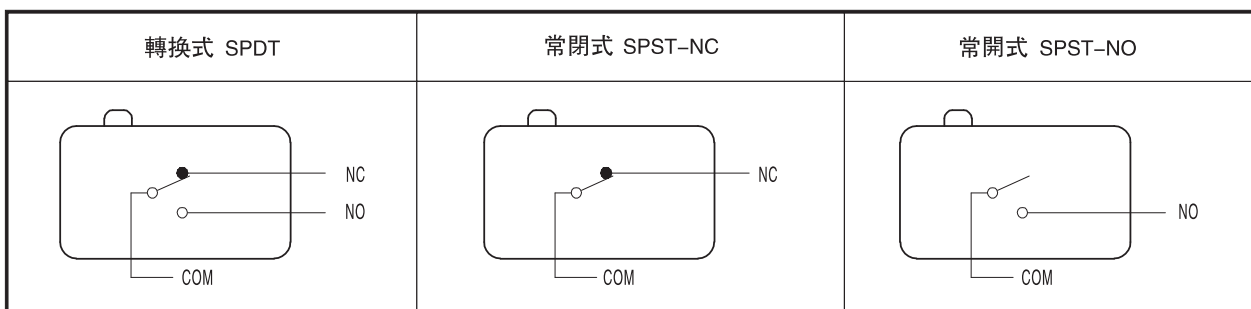
注：指無動臂時按鈕上的動作力。 Note: Refers to the operating force of no lever.

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

MS10 □-□□□-□□- (□)  
 1 2 3 4 5 6 7

<b>1</b> 溫度等級 Degrees of temperature	無標記 No mark: 25T125		0: 無動臂 No lever A1/1: 短動臂 Short lever A2/2: 長動臂 Long lever A3/3: 中動臂 Middle lever A4/4: 短滾輪臂 Short roller A5/5: 長滾輪臂 Long roller A6/6: 弧形動臂 Arc lever A: □/□非標準動臂 Not standard lever
<b>2</b> 額定值 Ratings	MS10-16: 16(4)A125/250VAC 16GPA125/250VAC 1/2hp125/250VAC 10A30VDC MS10-10: 10A125/250VAC 10(3)A125/250VAC 10GPA125/250VAC 1/4hp250VAC 1/2hp125VAC 1/3hp125/250VAC 8A30VDC MS10-06: 6A125/250VAC 6(2)A125/250VAC 6GPA125/250VAC 1/4hp125/250VAC 6A30VDC MS10-03: 3A125/250VAC 3(1)A125/250VAC 3GPA125/250VAC 1/6hp125/250VAC 3A30VDC MS10-01: 1A125/250VAC 1(0.3)A125/250VAC 1GPA125/250VAC 1/8hp125/250VAC 1A30VDC	<b>4</b> 驅動形式 Actuator forms	Note: 1) A 表示動臂安裝在靠近按鈕位置, 無字母A表示動臂安裝在離按鈕較遠位置。 2) □表示非標準動臂的代號。 3) 若動臂為內安裝式, 則在動臂代號後加字母N。 Note: 1) A Indicate the lever near to the plunger, no A indicate the lever far away from the plunger 2) □Indicate not standard lever plunger. 3) If lever is amoundard inside, add "N" after the lever code.
		<b>5</b> 端子類型 Terminal type	A: 250快接端子 250 Quick-connect terminal B: 187快接端子(厚0.8mm) 187 quick-connect terminal (thick 0.8mm) C: 187快接端子(厚0.5mm) 187 quick-connect terminal (thick 0.5mm) F: 焊接端子 Solder terminal P: PCB端子 PCB terminal Y: 非標準端子 Not standard terminal
		<b>6</b> 動作力(max) Operating force	015: 0.15N 025: 0.25N 050: 0.5N 100: 1N 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.
<b>3</b> 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)	<b>7</b> 附加規格編號 Additional spec numbers	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. 附加規格編號用阿拉伯數字表示, 在沒有附加規格編號時, 該位置空缺。 Additional specs number shows by Arabic numerals. If there is no additional numbers, the place is vacant.

◆ 接觸形式說明圖 Circuit illustration



微動開關系列  
MICRO SWITCH SERIES

KW3A

KW4A

KW4A(S)

KW10

MS1

MS2

MS3

MS5

MS10

防水開關系列  
WATERPROOF SWITCH SERIES

WS1

WS1L

WS2

WS3

WS4

WS5

WS6

WS7

電源開關系列  
POWER SWITCH SERIES

KDC-A11

KDC-A04

PS4

PS5

PS6

RS1

RS2

RS3

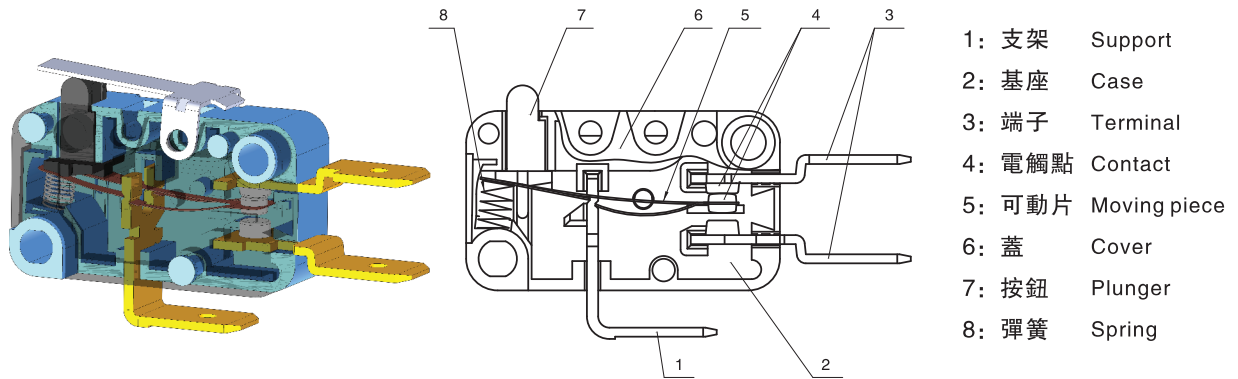
其他開關系列  
OTHER SWITCH SERIES

SP02

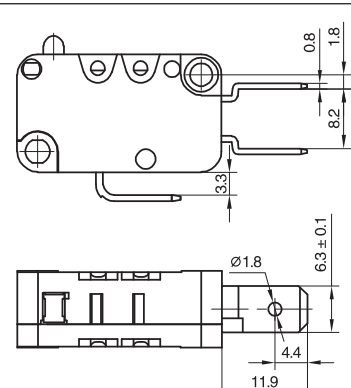
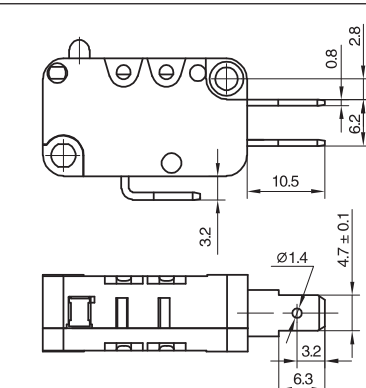
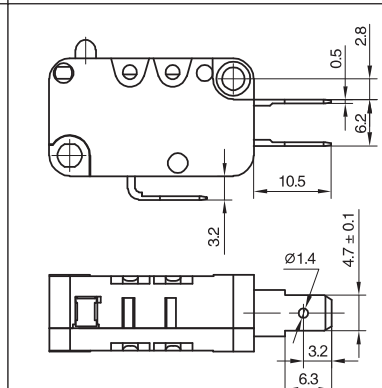
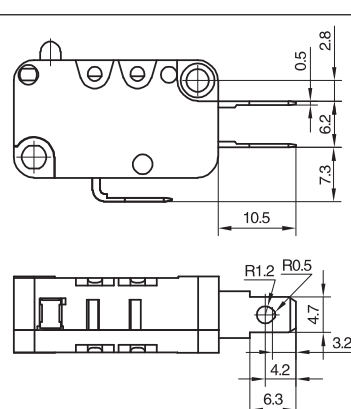
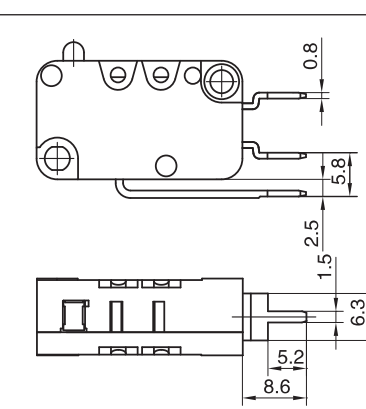
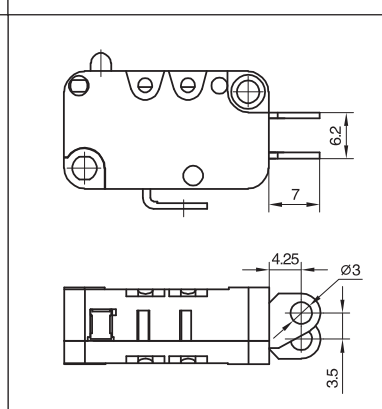
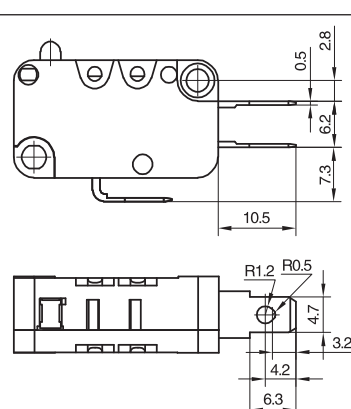
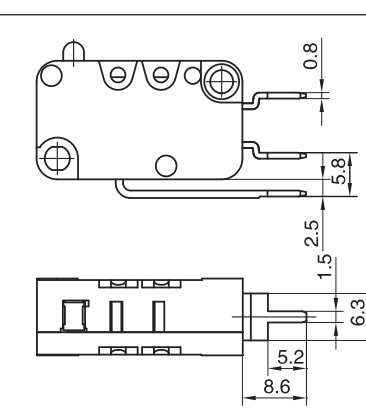
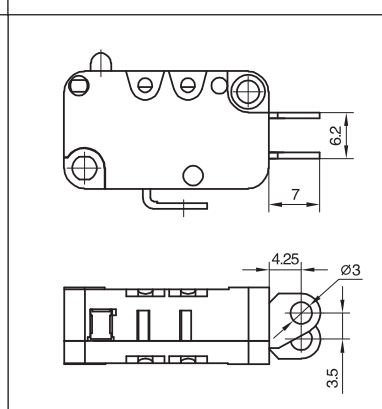
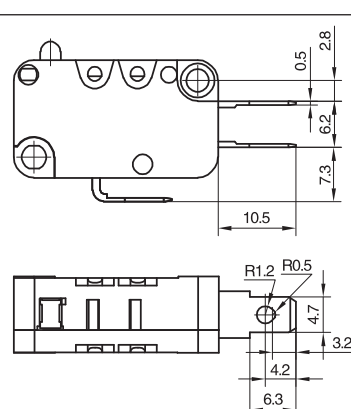
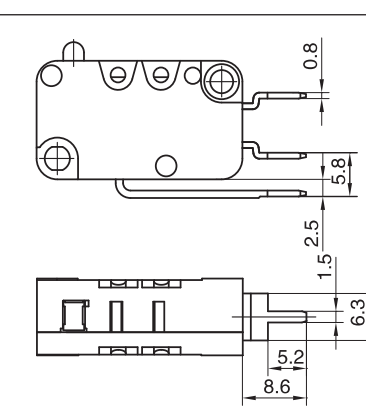
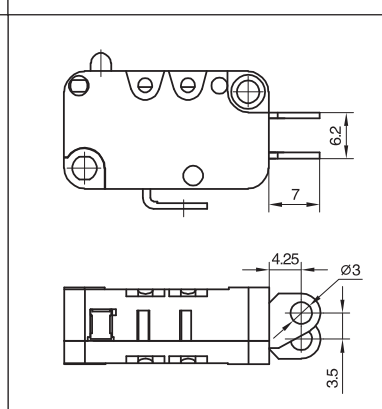
KXZ2

PRS1

### ◆ 內部構造圖 Internal configuration drawing



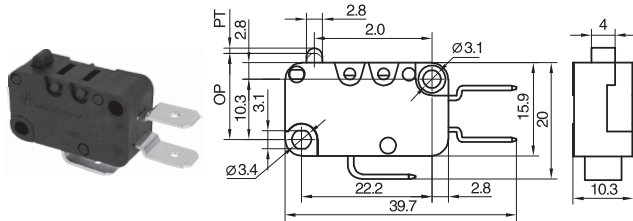
### ◆ 接線端配置及尺寸 Connect terminals collocation and dimensions

	A 快接端子#250 Quick connect terminal #250	B 快接端子#187 (t=0.8) Quick connect terminal #187 (t=0.8)	C 快接端子#187 (t=0.5) Quick connect terminal #187 (t=0.5)
WS1			
WS1L			
WS2			
WS3			
WS4			
WS5			
WS6			
WS7			
PS4			
PS5			
PS6			
RS1			
RS2			
RS3			
SP02			
KXZ2			
PRS1			

Since 1995, we focus on switches

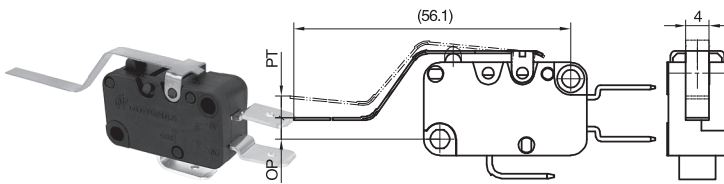
◆ 外形尺寸和動作特性 Dimensions and operating characteristics

MS10-□Z0-A015  
MS10-□Z0-A025  
MS10-□Z0-A050  
MS10-□Z0-A100



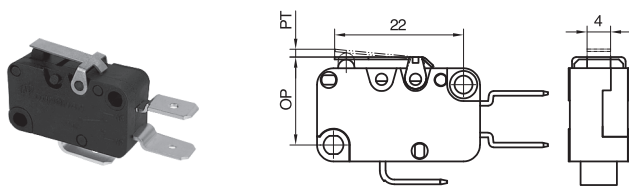
型號 Model	MS10-□Z0-A015	MS10-□Z0-A025	MS10-□Z0-A050	MS10-□Z0-A100
OF Max(N)	0.15	0.25	0.50	1.00
RF Min(N)	0.02	0.06	0.13	0.25
PT Max(mm)	1.2			
OT Min(mm)	1.0			
MD Max(mm)	0.3			
OP(mm)	15 ± 0.6			

MS10-□ZB1-A015  
MS10-□ZB1-A025  
MS10-□ZB1-A050  
MS10-□ZB1-A100



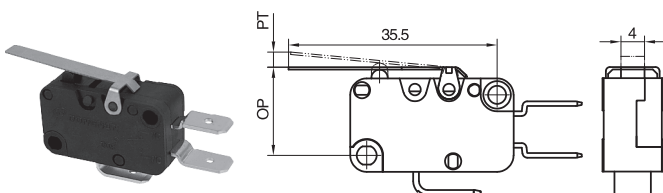
型號 Model	MS10-□ZB1-A015	MS10-□ZB1-A025	MS10-□ZB1-A050	MS10-□ZB1-A100
OF Max(N)	0.05	0.065	0.2	0.4
RF Min(N)	0.005	0.015	0.03	0.08
PT Max(mm)	6.2			
OT Min(mm)	2.5			
MD Max(mm)	1.7			
OP(mm)	3.2 ± 2			

MS10-□Z1-A015  
MS10-□Z1-A025  
MS10-□Z1-A050  
MS10-□Z1-A100



型號 Model	MS10-□Z1-A015	MS10-□Z1-A025	MS10-□Z1-A050	MS10-□Z1-A100
OF Max(N)	0.15	0.25	0.50	1.00
RF Min(N)	0.02	0.06	0.13	0.25
PT Max(mm)	1.3			
OT Min(mm)	1.0			
MD Max(mm)	0.3			
OP(mm)	15 ± 0.6			

MS10-□Z3-A015  
MS10-□Z3-A025  
MS10-□Z3-A050  
MS10-□Z3-A100



型號 Model	MS10-□Z3-A015	MS10-□Z3-A025	MS10-□Z3-A050	MS10-□Z3-A100
OF Max(N)	0.10	0.15	0.25	0.50
RF Min(N)	0.015	0.025	0.06	0.12
PT Max(mm)	3.5			
OT Min(mm)	2.0			
MD Max(mm)	1.0			
OP(mm)	15 ± 1.2			

微動開關系列  
MICRO SWITCH SERIES

KW3A

KW4A

KW4A(S)

KW10

MS1

MS2

MS3

MS5

MS10

防水開關系列  
WATERPROOF SWITCH SERIES

WS1

WS1L

WS2

WS3

WS4

WS5

WS6

WS7

電源開關系列  
POWER SWITCH SERIES

KDC-A11

KDC-A04

PS4

PS5

PS6

RS1

RS2

RS3

其他開關系列  
OTHER SWITCH SERIES

SP02

KXZ2

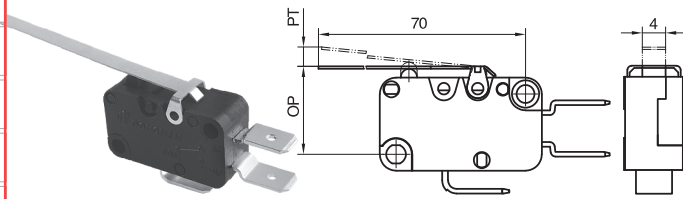
PRS1

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

**微動開關系列**  
MICRO SWITCH SERIES

- KW3A
- KW4A
- KW4A(S)
- KW10
- MS1
- MS2
- MS3
- MS5
- MS10

MS10-□Z2-A015  
MS10-□Z2-A025  
MS10-□Z2-A050  
MS10-□Z2-A100

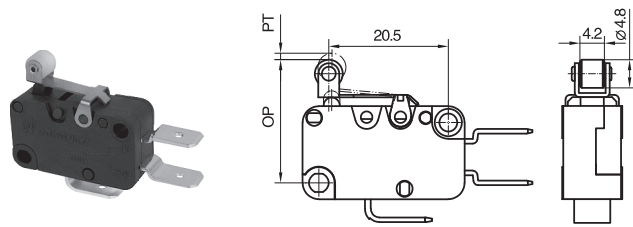


型號 Model	MS10-□Z2-A015	MS10-□Z2-A025	MS10-□Z2-A050	MS10-□Z2-A100
OF Max(N)	0.05	0.07	0.14	0.25
RF Min(N)	0.005	0.015	0.025	0.05
PT Max(mm)	7.6			
OT Min(mm)	4.0			
MD Max(mm)	1.8			
OP(mm)	15.2 ± 2.5			

**防水開關系列**  
WATERPROOF SWITCH SERIES

- WS1
- WS1L
- WS2
- WS3
- WS4
- WS5
- WS6
- WS7

MS10-□Z4-A015  
MS10-□Z4-A025  
MS10-□Z4-A050  
MS10-□Z4-A100

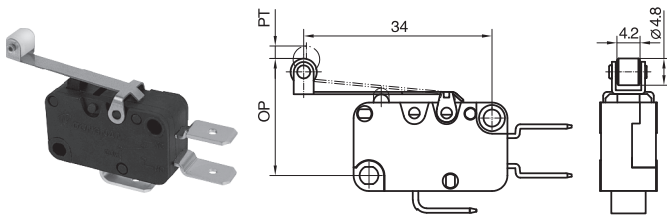


型號 Model	MS10-□Z4-A015	MS10-□Z4-A025	MS10-□Z4-A050	MS10-□Z4-A100
OF Max(N)	0.15	0.25	0.50	1.00
RF Min(N)	0.02	0.05	0.12	0.25
PT Max(mm)	1.3			
OT Min(mm)	1.0			
MD Max(mm)	0.4			
OP(mm)	20.3 ± 0.8			

**電源開關系列**  
POWER SWITCH SERIES

- KDC-A11
- KDC-A04
- PS4
- PS5
- PS6

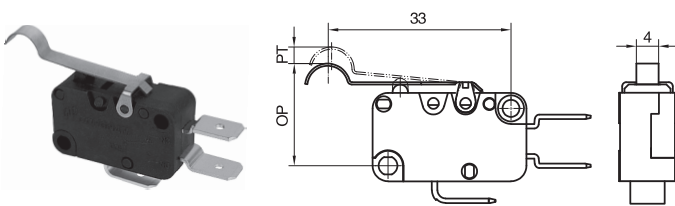
MS10-□Z5-A015  
MS10-□Z5-A025  
MS10-□Z5-A050  
MS10-□Z5-A100



型號 Model	MS10-□Z5-A015	MS10-□Z5-A025	MS10-□Z5-A050	MS10-□Z5-A100
OF Max(N)	0.10	0.15	0.25	0.50
RF Min(N)	0.015	0.025	0.06	0.12
PT Max(mm)	3.5			
OT Min(mm)	2.0			
MD Max(mm)	1.0			
OP(mm)	20.3 ± 1.2			

- RS1
- RS2
- RS3

MS10-□Z6-A015  
MS10-□Z6-A025  
MS10-□Z6-A050  
MS10-□Z6-A100



型號 Model	MS10-□Z6-A015	MS10-□Z6-A025	MS10-□Z6-A050	MS10-□Z6-A100
OF Max(N)	0.10	0.15	0.25	0.50
RF Min(N)	0.015	0.025	0.06	0.12
PT Max(mm)	3.5			
OT Min(mm)	2.0			
MD Max(mm)	1.0			
OP(mm)	18.6 ± 1.2			

**其他開關系列**  
OTHER SWITCH SERIES

- SP02
- KXZ2
- PRS1