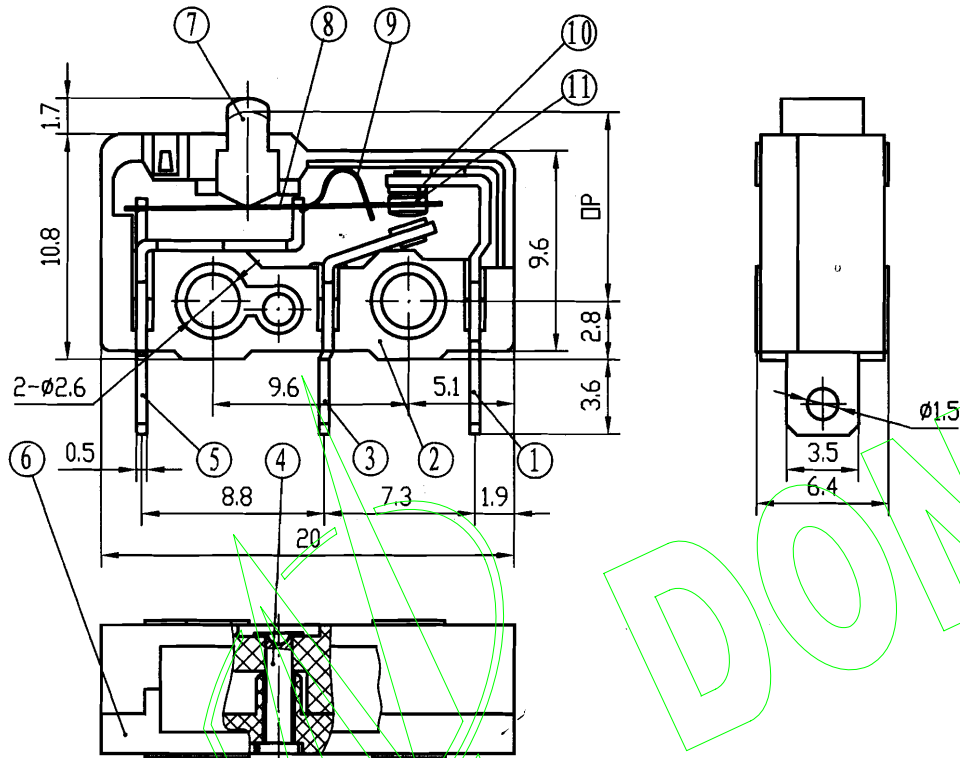


1. Specifications 技术特性表

RATINGS 额定值	10 (4) A125/ 250V AC 25T125 1E4
TEMPERATURE 温度等级	10GPA 125/250VAC 1/2hp 250VAC
ELECTRONICAL LIFE 电气寿命	25T125, 1E4, 50-60Hz 1P40
	4 A, 30 V dc 25T125, 1E4, IP40
INSULATION STRENGTH 绝缘电阻	100MΩ MIN
TEST VOLTAGE 耐电压	AC1000V/1500V
CONTACT RESISTANCE 接触电阻	50mΩ MAX
OPERATING FORCE 动作力	2N MAX
MOVEMENT DIFFERENTIAL TRAVEL 差动行程	0.2mm MAX
OPERATING POSITION OP 动作位置	9.1 ± 0.4mm



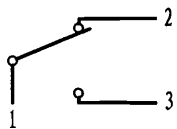
2. Parts List 零件材质表

No.	Name 名称	Material 材料
1	NC terminal 常闭端子	Brass alloy H65, Silver plated 黄铜, 镀银
2	CASE 底座	Plastic PBT4308 (黑色) 工程塑料
3	NO terminal 常开端子	Brass alloy H65, Silver plated 黄铜, 镀银
4	Peg 铆钉	Aluminum alloy LY, 铝合金
5	TERMINAL 支架	Brass alloy H65, Silver plated 黄铜, 镀银
6	COVER 盖	Plastic PBT4308 (黑色) 工程塑料
7	Plunger 开关子	Plastic PPS-HGR40 工程塑料
8	Moving piece 可动片	Beryllium bronze QBe2 铍青铜
9	Spring sheet 簧片	Beryllium bronze QBe2 铍青铜
10	Contact 电触点	AgNi10 银-镍
11	Contact 电触点	AgNi10 银-镍

3. Safety authentication 安全认证



SCHEMATIC DIAGRAM



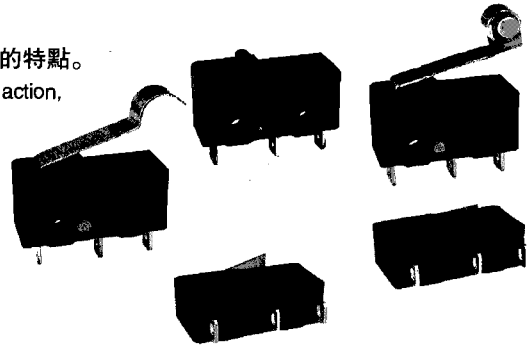
RoHS Compliant

		DESIGN	陈丹琼 20120719	KW4A-AZ0SF200-7260
		CHECKED BY	罗祥勇 20120719	
		TECHNICS		AVY8 3.604.070-335
EDITION	20120719			DONGNAN ELECTRONICS
PROJ		STANDARDIZATION		
		APPROVED BY	江小林 20120719	

## KW4A型微動開關系列 Micro switch series

### ◆ 安全可靠的小型開關 Safe, reliable miniature switch

- 結構緊湊。具有微小觸點間隙，快速動作、高靈敏和微小動作行程的特點。  
Nice appearance, tight configuration. Characteristic: small contact gap, quick action, high sensitivity and small operating travel.
- 長壽命，高可靠。  
Long life, high reliability.
- 接線端子種類齊全  
A variety of contact terminals
- 配備各種形式動臂  
A variety of levers
- 採用熱固性或熱塑性塑料外殼  
Adopt thermosetting plastic or thermoplastic
- 廣泛應用於各種家用電器、電子設備、自動化設備、通訊設備、汽車電子、儀器儀表等領域。  
Widely used in home appliance, electronic equipment, automatic machine, communication equipment, car electron, apparatus and instrument etc.



### ◆ 技術特性 Specifications

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 25 cycles/min
絕緣電阻 Insulation resistance	≥ 100MΩ (500VDC)
接觸電阻 Contact resistance	動作力 > 0.5N: ≤ 30mΩ (見注) 動作力 ≤ 0.5N: ≤ 50mΩ (見注) OF > 0.5N: ≤ 30mΩ (see note) OF ≤ 0.5N: ≤ 50mΩ (see note)
耐電壓 Test voltage	同極不相接端子間 Between terminals of the same polarity
	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.
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: 500m/s <sup>2</sup> (約50G)max 故障: 動作力 > 0.5N: 300m/s <sup>2</sup> (約30G)max 動作力 ≤ 0.5N: 200m/s <sup>2</sup> (約20G)max Destruction: OF > 0.5N: 1000m/s <sup>2</sup> (approx. 100G)max OF ≤ 0.5N: 500m/s <sup>2</sup> (approx. 50G)max Malfunction: OF > 0.5N: 300m/s <sup>2</sup> (approx. 30G)max OF ≤ 0.5N: 200m/s <sup>2</sup> (approx. 20G)max
壽命 Life	機械 ≥ 1,000,000次; Mechanical ≥ 1,000,000 cycles 電氣 ≥ 10,000次; Electrical ≥ 10,000 cycles
質量 Weight	約1.6g(無動臂型) Approx. 1.6g(No lever)
安全認證 Safety approvals	UL、CUL、VDE、TUV、CE、EK、CQC

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

code	Rating, Rated ambient temperature, approval
KW4A-	5A 125VAC T85, 5(3)A, 5GPA 125/250VAC, 1/4hp 250VAC, 25T123, 5E4, IP40 - UL cUL
	5A 250VAC, 10T85, 10E3 - VDE
	5(3)A 250VAC, 25T125, 5E4 - TUV, CE, EK
	5(2)A 250VAC, 25T125, 1E4 - CQC
KW4A-A	5(3)A 125/250VAC, 25T125, 5E4, IP40 - ENEC, Demko, CB
	4A 30VDC, 25T125, 5E4, IP40 - UL, cUL, ENEC, Demko, CB
	10(4)A, 10GPA 125/250VAC, 1/2hp 250VAC, 25T125, 1E4 - UL, cUL
	10(4)A 125/250VAC, 25T125, 1E4, IP40 - ENEC, Demko, CB

code	Actuator
0	no lever
1	Short lever
2	Long lever
3	Middle lever
5	Roller lever
6	Simulated roller lever
<input type="checkbox"/>	other lever options are available (see page 24)

code	Operating force
075	75gf max. (0.75N max.)
100	100gf max. (1N max.)
150	150gf max. (1.5N max.)
200	200gf max. (2N max.)
250	250gf max. (2.5N max.)
<input type="checkbox"/>	other operating force options are available
Note: these values are for the no lever models	

code	Case
S	Thermoplastic (standard)
G	Thermosetting

code	Plunger
none	Standard plunger
A	Short plunger
B	Long plunger
D	Abnormally plunger
see page 21	

code	Terminal
F	Solder terminal
P	PCB terminal
L	Left side PCB terminal
R	Right side PCB terminal
T	Quick-connect terminal (#110)
<input type="checkbox"/>	other terminal options are available

code	Additional specs numbers
<input type="checkbox"/>	When using not standard parts such as not standard terminal.
<input type="checkbox"/>	When customer has particular operating value or other requirements.
<input type="checkbox"/>	Additional specs number shows by arabic numerals. If there is no additional numbers, the place is vacant.

code	Contact Configurations
Z	SPDT 
T	SPST-normally open 
D	SPST-normally closed 

## ◆ 接觸形式說明圖 Circuit illustration

<p>轉換式 SPDT</p>	<p>常開式 SPST-NO</p>	<p>常閉式 SPST-NC</p>
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### ◆ 按鈕規格說明圖 Plunger spec illustration

按鈕標記 Mark on plunger	無標記 No mark	A	B	D
按鈕尺寸 Plunger dimensions				

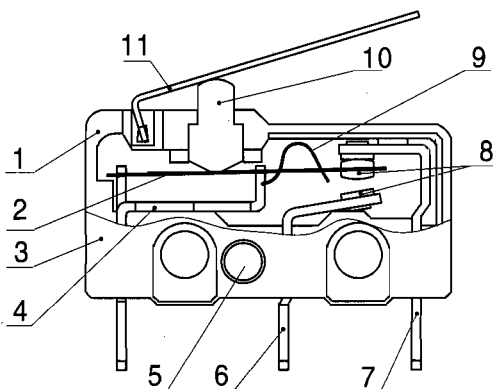
### ◆ 接線端尺寸 Terminal dimensions

<b>F</b> 焊接端子 Solder terminal  公共端 常開端 常閉端 Common terminal NO terminal NC terminal	<b>T</b> 快接端子#110 Quick connect terminal #110  	<b>P</b> PCB端子 PCB terminal  
<b>L</b> 左側面PCB端子 Left side PCB terminal  	<b>R</b> 右側面PCB端子 Right side PCB terminal  	

### ◆ 安裝孔尺寸 Mounting hole dimensions

 	<b>PCB端子</b> PCB terminal  	<b>左側面PCB端子</b> Left side PCB terminal  	<b>右側面PCB端子</b> Right side PCB terminal  
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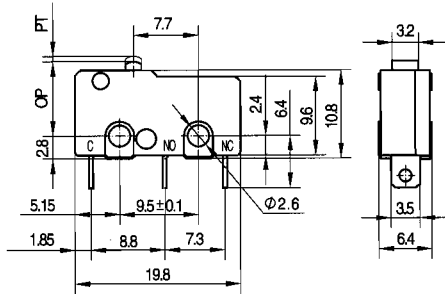
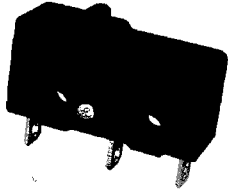
### ◆ 內部構造圖 Internal configuration drawing



- |            |                   |
|------------|-------------------|
| 1 基座       | Case              |
| 2 可動片      | Moving piece      |
| 3 蓋        | Cover             |
| 4 支架       | Support           |
| 5 鉚釘       | Rivet             |
| 6 常開端子     | NO terminal       |
| 7 常閉端子     | NC terminal       |
| 8 電觸點      | Contact           |
| 9 簧片       | Spring            |
| 10 開關子(按鈕) | Plunger           |
| 11 動臂(杠杆)  | Moving arm(Lever) |

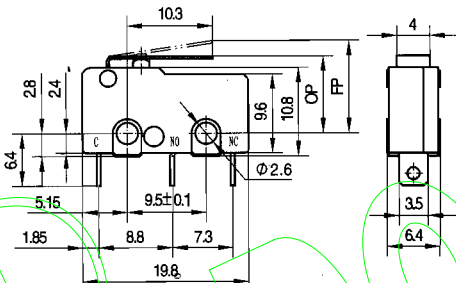
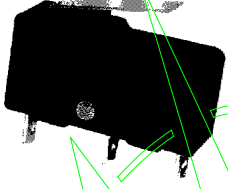
## ◆ 外形尺寸和動作特性 Dimensions and operating characteristics

KW4A-Z0□F100  
KW4A-Z0□F150  
KW4A-Z0□F200  
KW4A-Z0□F300



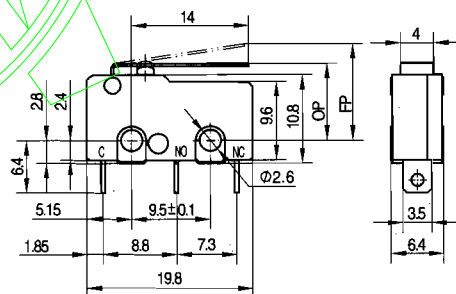
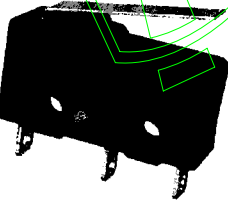
型號 Model	KW4A-Z0□F100	KW4A-Z0□F150	KW4A-Z0□F200	KW4A-Z0□F300
OF Max(N)	1.00	1.50	2.00	3.00
RF Min(N)	0.20	0.35	0.50	0.80
PT Max(mm)	0.8			
OT Min(mm)	0.5			
MD Max(mm)	0.2			
OP(mm)	9.1±0.4			

KW4A-Z1□F100  
KW4A-Z1□F150  
KW4A-Z1□F200  
KW4A-Z1□F300



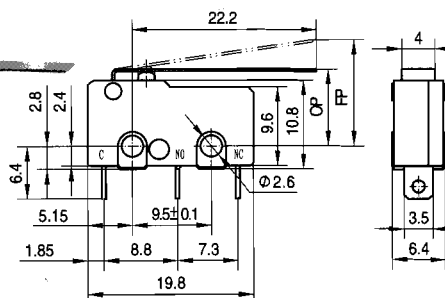
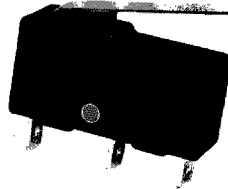
型號 Model	KW4A-Z1□F100	KW4A-Z1□F150	KW4A-Z1□F200	KW4A-Z1□F300
OF Max(N)	0.35	0.60	0.80	1.00
RF Min(N)	0.05	0.15	0.20	0.35
OT Min(mm)	1.5			
MD Max(mm)	0.6			
FP Max(mm)	12.0			
OP(mm)	9.5±0.8			

KW4A-Z3□F100  
KW4A-Z3□F150  
KW4A-Z3□F200  
KW4A-Z3□F300



型號 Model	KW4A-Z3□F100	KW4A-Z3□F150	KW4A-Z3□F200	KW4A-Z3□F300
OF Max(N)	0.30	0.45	0.60	0.85
RF Min(N)	0.05	0.10	0.15	0.20
OT Min(mm)	1.0			
MD Max(mm)	0.8			
FP Max(mm)	13.0			
OP(mm)	9.8±1			

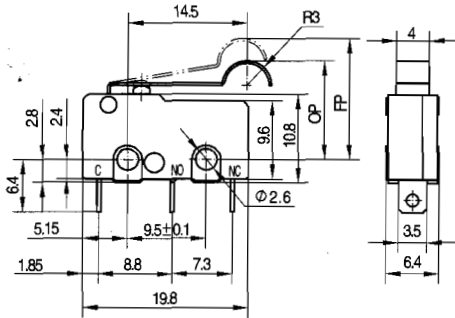
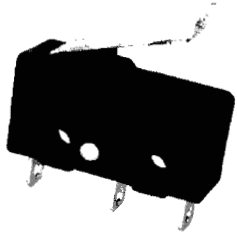
KW4A-Z2□F100  
KW4A-Z2□F150  
KW4A-Z2□F200  
KW4A-Z2□F300



型號 Model	KW4A-Z2□F100	KW4A-Z2□F150	KW4A-Z2□F200	KW4A-Z2□F300
OF Max(N)	0.20	0.30	0.40	0.60
RF Min(N)	0.03	0.08	0.10	0.18
OT Min(mm)	2.0			
MD Max(mm)	1.5			
FP Max(mm)	16.0			
OP(mm)	10±1.5			

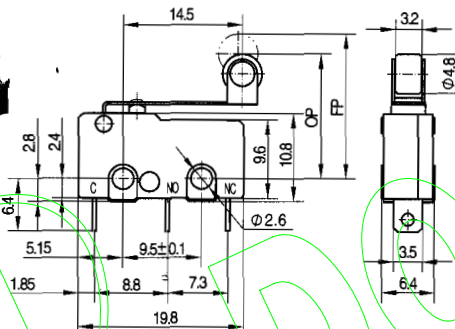
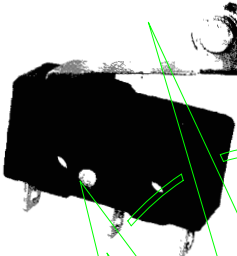
## ◆ 外形尺寸和動作特性 Dimensions and operating characteristics

KW4A-Z6□F100  
KW4A-Z6□F150  
KW4A-Z6□F200  
KW4A-Z6□F300



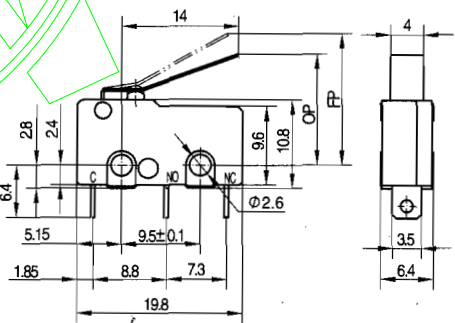
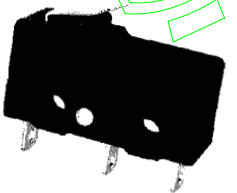
型號 Model	KW4A-Z6□F100	KW4A-Z6□F150	KW4A-Z6□F200	KW4A-Z6□F300
OF Max(N)	0.30	0.45	0.60	0.85
RF Min(N)	0.05	0.10	0.15	0.20
OT Min(mm)	1.2			
MD Max(mm)	0.8			
FP Max(mm)	17.5			
OP(mm)	14.5 ± 1			

KW4A-Z5□F100  
KW4A-Z5□F150  
KW4A-Z5□F200  
KW4A-Z5□F300



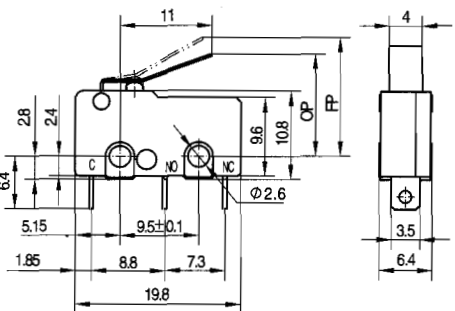
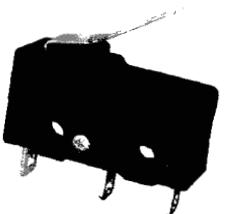
型號 Model	KW4A-Z5□F100	KW4A-Z5□F150	KW4A-Z5□F200	KW4A-Z5□F300
OF Max(N)	0.30	0.45	0.60	0.85
RF Min(N)	0.05	0.10	0.15	0.20
OT Min(mm)	1.2			
MD Max(mm)	0.8			
FP Max(mm)	19.0			
OP(mm)	16.2 ± 1			

KW4A-ZE□F100  
KW4A-ZE□F150  
KW4A-ZE□F200  
KW4A-ZE□F300



型號 Model	KW4A-ZE□F100	KW4A-ZE□F150	KW4A-ZE□F200	KW4A-ZE□F300
OF Max(N)	0.30	0.45	0.60	0.85
RF Min(N)	0.05	0.10	0.15	0.20
OT Min(mm)	1.2			
MD Max(mm)	0.8			
FP Max(mm)	17.5			
OP(mm)	14 ± 1			

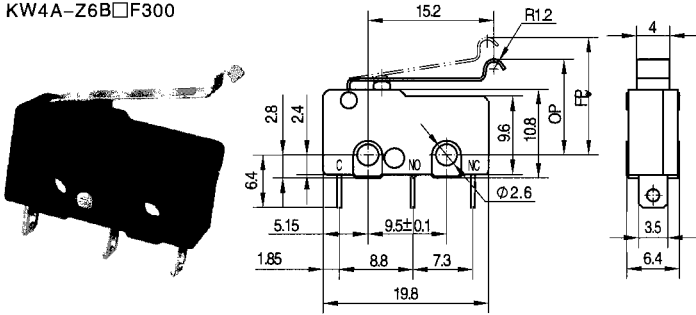
KW4A-ZQ□F100  
KW4A-ZQ□F150  
KW4A-ZQ□F200  
KW4A-ZQ□F300



型號 Model	KW4A-ZQ□F100	KW4A-ZQ□F150	KW4A-ZQ□F200	KW4A-ZQ□F300
OF Max(N)	0.32	0.50	0.65	1.00
RF Min(N)	0.05	0.10	0.15	0.20
OT Min(mm)	1.2			
MD Max(mm)	0.8			
FP Max(mm)	15.5			
OP(mm)	13.2 ± 1			

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

KW4A-Z6B□F100  
 KW4A-Z6B□F150  
 KW4A-Z6B□F200  
 KW4A-Z6B□F300



型號 Model	KW4A-Z6B□F100	KW4A-Z6B□F150	KW4A-Z6B□F200	KW4A-Z6B□F300
OF Max(N)	0.25	0.40	0.50	0.75
RF Min(N)	0.05	0.10	0.15	0.20
OT Min(mm)	1.2			
MD Max(mm)	0.8			
FP Max(mm)	16.5			
OP(mm)	13±1.2			

◆ 可供選擇的非標準動臂代號和外形特徵尺寸 Not standard levers for choose and outline characteristic dimensions

動臂代號 Lever code	外形特徵尺寸 Outline characteristic dimensions	動臂代號 Lever code	外形特徵尺寸 Outline characteristic dimensions	動臂代號 Lever code	外形特徵尺寸 Outline characteristic dimensions
<b>3A</b>		<b>C</b>		<b>K</b>	
<b>N</b>		<b>G</b>		<b>Q1</b>	
<b>J</b>		<b>F1</b>		<b>S1</b>	
<b>J1</b>		<b>6A</b>		<b>5A</b>	
<b>J2</b>		<b>6C</b>			