

KIB-050A/KIB-050M 使用說明書

1. 產品內容清單

本體	1PC
腳架組(KI-05M)	1PC
I/O電源線(KIL-02)	1 M
放電針清潔刷	1PC
說明書	本冊
保證卡	1PC
電源轉換器組(KIC-06/KIC-06C)	選購

2. 用途說明

本靜電消除器KIB-050 以電量放電產生離子，並採用氣壓氣流(blow type)，將離子快速送達目標，可快速的去除靜電及灰塵，並可預防因靜電氣所造成的污染，能簡單的大幅提升產品的品質及生產良率。

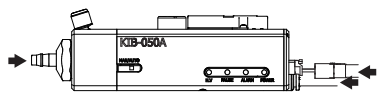
3. 特點與優點

- ① 體積小、重量輕、出風量可調整，可用於桌上或設備內。
- ② 高周波交流放電，離子綿密可深入凹凸處，確實去除靜電。
- ③ 高精度離子平衡±15V 以下。(使用標準噴嘴 KI-N03S)
- ④ 近處、遠處，皆可高速除電。
- ⑤ 放電異常時，警示燈及接點輸出，有效監控。
- ⑥ 可依據現場實際狀況，選購適當的空氣噴嘴。

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8. 使用方法

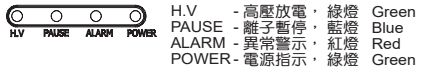
- ① 固定本體及噴嘴 ➡ 接上電源及空氣壓配管。



- ② 模式選擇 - MAN：啟動放電；
AUTO：檢測使用壓力控制放電。



- ③ 工作指示燈：
H.V - 高壓放電，綠燈 Green
PAUSE - 離子暫停，藍燈 Blue
ALARM - 異常警示，紅燈 Red
POWER - 電源指示，綠燈 Green



- ④ 乾淨壓縮空氣 ➡ 調整符合噴嘴使用的壓力 (詳 4. 規格表)
- ⑤ 開啟空氣源後 ➡ 暖機約 5 分鐘。
★通電中請勿關閉氣源★ (本產品可調整空氣的流量)
- ⑥ 使用一段時間後，放電針因濕氣產生結晶，請詳 9. 維護。
★建議經常清潔放電針，延長針的使用壽命，維持良好的離子平衡及除電效果★ (在良好維護的情形下，使用約 10,000 小時請更換放電針)
- ⑦ 紅色 LED 燈亮放電異常，切勿自行拆解，請參考P8.故障排除。

★定期保養清潔放電針，可減緩放電針之耗損和防止驅動元件負載過大造成故障。
★放電針屬消耗品，會因環境及開機時間，改變其效能及壽命。



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4. 規格表 ★本產品須搭配噴嘴使用，噴嘴需另行購買。

	KIB-050A	KIB-050M
氣源控制方式	電磁閥	節流閥
使用流體*1	乾淨壓縮空氣	
放電針電壓施加方式	高頻AC 約 2KV, 72KHz	
離子平衡*2	±15V	
LED工作指示燈	H.V 高壓放電	綠燈LED
	PAUSE 離子暫停	藍燈LED
	ALARM 異常警示	紅燈LED
	POWER 電源指示	綠燈LED
輸入信號	放電暫停控制 DC10~30V	
輸出信號	NPN電晶體出力	
	放電異常	輸出電壓 24V
臭氧量	0.03ppm	
空氣流量*3	126 ℓ/min(ANR)	178 ℓ/min(ANR)
使用壓力範圍	0.15~0.5MPa	0.05~0.5MPa
	1.5~5.0kgf/cm ²	0.5~5.0kgf/cm ²
使用環境溫度	室內 0~40°C	
入力電源	DC24V ±5%	
消耗電流 (約)	100mA	60mA
外型尺寸(本體) (WxDxH)	92.7x37x33.1mm	90.9x37x33.1mm
重量(本體)	142g	97g

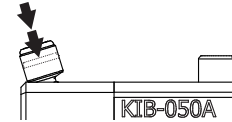
- ★ 1. 使用時 禁止於未供給氣源狀態下強制放電。
- ★ 2. 離噴嘴出口處300mm。
- ★ 3. 空氣流量依使用KI-N03S噴嘴，在0.5MPa條件下所得實測值。最小流量不得低於35ℓ/min(ANR)。

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9. 維護

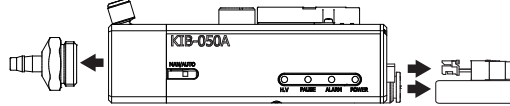
<< 快速清潔 >>

清針按鈕下壓三次，去除結晶物

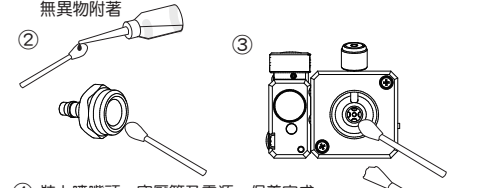


<< 定期清潔 >>

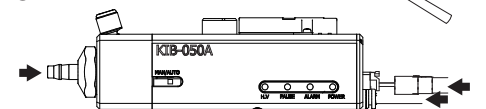
- ① 移除電源 ➡ 移除空壓管 ➡ 拆掉噴嘴頭



- ② 棉花棒沾酒精清潔搭配的噴嘴頭
- ③ 清潔並去除放電針上的結晶物；再使用清潔刷，確認放電針有無異物附著



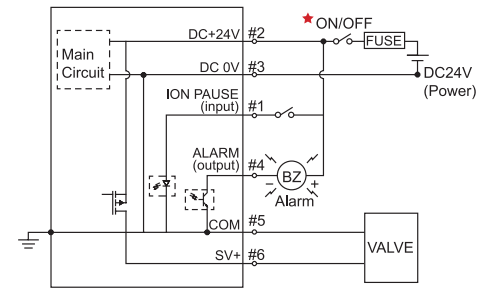
- ④ 裝上噴嘴頭、空壓管及電源，保養完成



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5. 配線說明

入出力接線圖



I/O 電源線	PIN	顏色	說明	● 出力點 ○ 入力點
1	#1	綠	離子暫停	○
2	#2	紅	電源 24V	○
3	#3	黑	電源 0V	○
4	#4	白	警告信號	●
5	#5	黑	共同 0V	○
6	#6	紅	電磁閥 DC+	●

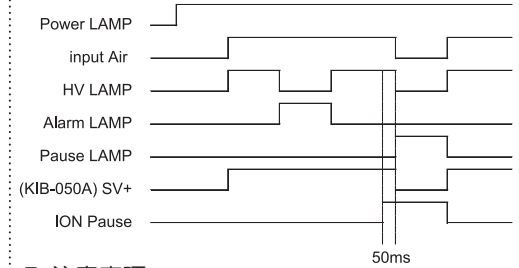
★註：控制電源ON/OFF，請由(V+)端控制
留意點：pin#3 及 pin#5，與箱體在內部有連接

入力端子說明

1	#1：ION Pause	4	#4：Alarm output
2	#2：Power +DC24V	5	#5：COM
3	#3：Power GND (0V)	6	#6：SV+

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6. 時序圖說明



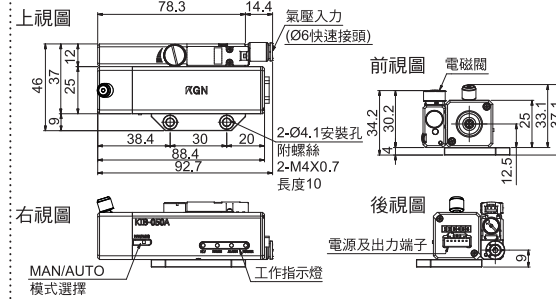
7. 注意事項

- ⚠ 避免使用於有水氣、油氣、灰塵、高溫、多濕的場所。
嚴禁於爆炸性、易燃性氣體，及需要防爆的場合使用本產品
- ⚠ 嚴禁拆解：內部迴路及放電針高電壓危險，勿自行拆解本產品。
- ⚠ KIB-050 不可單獨使用，須在加裝空氣噴嘴。
- ⚠ 更換或清潔放電針，務必關閉電源，並且小心避免被尖端刺傷。
- ⚠ 通電中不可拆下空氣噴嘴，避免高電壓觸電危險。
- ⚠ 禁止於未供給氣源狀態下啟動放電。
- ⚠ 觸電危險：○ 通電中不要觸摸放電針
○ 實施配線、保養或維修，請拔除電源
○ 請務必做好接地

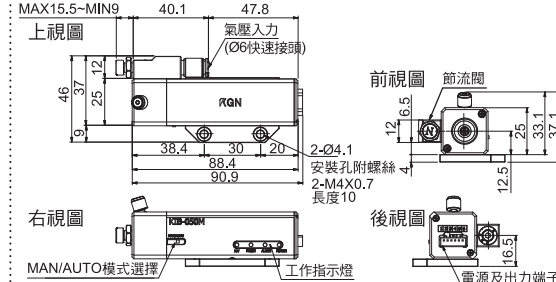
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尺寸圖 (單位: mm)

KIB-050A



KIB-050M



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KG N IONIZER 故障排除參考

狀況	可能原因	對策
POWER綠燈持續亮，ALARM 紅燈會經常閃爍	供給空氣壓含過多的水氣、油氣 供給空氣壓力超出規格值	請確認空氣壓的除油、除水設備 請降低空氣壓的壓力 (請參考型錄的標示值)
POWER綠燈不亮	電源未接 電源入力端子未完全插入主機	接上電源 例如：KIC-06 重新插好電源入力插頭
沒有空氣噴出	空氣壓源沒有打開	請打開空氣壓源
ALARM 紅燈持續亮起	本體上的節流閥完全關閉	請逆時針旋轉，開節流閥
	放電針尖積碳或結晶過多	請打開噴嘴，以棉花棒沾酒精清潔放電針尖
	供給的空氣壓含有過多的水氣、油氣	擦乾噴嘴及放電針上的水氣，並確認空氣壓的除油、除水設備
電路故障		請聯絡服務處

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KIB-050A/KIB-050M Instruction Manual

1. Product list

Body..... 1 PC Clean brush..... 1 PC
Mounting kit (KI-05M)..... 1 PC Instruction manual.. This
I/O Connector(KIL-02)..... 1 M Warranty..... 1 PC
Power adapter(KIC-06/KIC-06C).....Option

2. Applications of this product

This static eliminator (Model No. KIB-050) produces ions through Corona Discharge, which are sent to the destination in a timely manner using the blow type method. The model is capable of rapidly eliminating static and dust as well as preventing the pollution caused by static currents. It can easily but vastly improve product quality and production yield.

3. Features and advantages

- Small volume, light weight, flow volume adjustable, convenient for desktop or inside-equipment applications.
- High frequency AC discharge, high density ion capable of infiltrating into cavities, hence thoroughly eliminating static electricity.
- High accuracy ion balance to lower than $\pm 15V$ (Use standard KI-N03S discharge nozzle)
- High speed discharge in both short or long distance.
- When abnormal discharge occurs, there will be a warning light and contact point output for effective monitoring and control.
- Optional purchase of suitable air discharge nozzle according to actual requirement for your convenience.

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8. Operation

- Secure the main body of Model KIB-050 and the discharge nozzle. ➔ Connect the power and air pressure pipes.



- Mode selection- MAN : Ionic discharge ;

AUTO : Detecting the air source, discharging the electric.



- Indicator LED :

H.V - Green LED
PAUSE - Blue LED
ALARM - Red LED
POWER - Green LED



- Filtered clean air (provided by user) ➔ Adjust the pressure suited for the discharge nozzle. (refer to 4. Specifications)

- Turn on the air in advance ➔ Warm up for five minutes. (Adjust the airflow using the airflow throttle valve)

- After using the product for some time, crystallite will form on the discharge needle due to moisture. (refer to 9. Maintenance)

★ It is suggested that the discharge needle be cleaned regularly to prolong the needle's service life and to maintain good ion balance and static electricity elimination effects. ★ (Replace the discharge needle after 10,000 hours of use provided regular maintenance has been done.)

- If the red LED light is on, this means abnormal discharge is taking place. Contact our customer service at once. Do not disassemble the model yourself. (refer to P.8 Troubleshooting)

★ Regular maintenance and cleaning of the Discharge Needle can reduce needle wear and prevent overload of the drive component that cause failure.
★ The Discharge Needle is a consumable item. Its effect and lifespan varies along with the environment and the operating time.



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4. Specifications

★ The main unit cannot be operated alone; always use it with a nozzle .

	KIB-050A	KIB-050M
Air source control method	Pilot operated solenoid valve	Needle valve
Media*1	Air(Non-lubricated dry air)	
Voltage at discharging pin	High-frequency AC Approximate 2KV, 72KHz	
Ion Balance*2	$\pm 15V$	
Indicator LED	H.V	Green LED
	PAUSE	Blue LED
	ALARM	Red LED
	POWER	Green LED
Input signal	Discharge stop signal	DC10~30V
Output signal	Discharge error	Open collector (NPN)
	Valve signal	Output 24V
Ozone volume	0.03ppm	
Supply Air Flow Range*3	126 l/min(ANR)	178 l/min(ANR)
Operating Air Pressure Range	0.15~0.5MPa	0.05~0.5MPa
	1.5~5.0kgf/cm ²	0.5~5.0kgf/cm ²
Operating Environmental Temperature	indoor 0~40°C	
Power Input	DC24V $\pm 5\%$	
Current Consumption (Approximate)	100mA	60mA
Overall Dimensions (Main Unit) (WxDxH)	92.7x37x33.1mm	90.9x37x33.1mm
Weight (Main Unit)	142g	97g

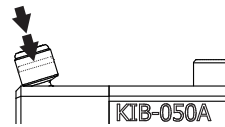
★ 1. When in use, it is prohibited to operate continuously in a state where no gas source is supplied.
★ 2. 300mm away for the nozzle outlet
★ 3. The airflow is according to the measured value under the 0.5MPa conditions with a KI-N03S nozzle. Supply Air Flow >35l/min(ANR) .

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9. Maintenance

<<Normal maintenance>>

Press three times on the clean button · Clean and remove any crystals from the needle

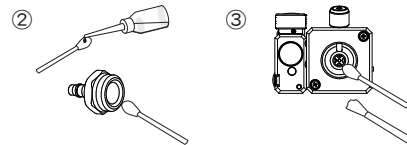


<<Regular maintenance>>

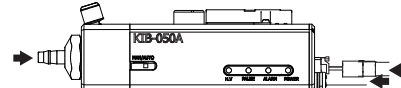
- Unplug the power ➔ Remove the tube ➔ Remove the nozzle



- Use a cotton wool with alcohol to clean the needle
- Clean and remove any crystals from the needle, and then use a Clean brush to confirm if foreign matter is affixed to the needle.



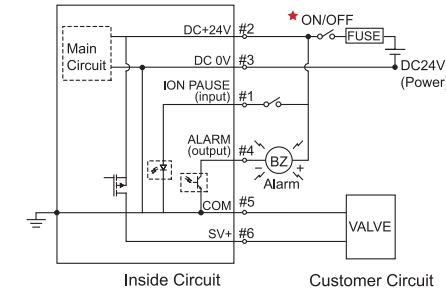
- Restore the nozzle and the compressive air pipe to complete the maintenance.



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5. Description of Wiring

Power and signal wiring structure



I/O Cable	PIN	Color	Description	Output Input
	#1	Green	Ion pause	○
	#2	Red	Power supply 24V	○
	#3	Black	Power supply 0V	○
	#4	White	Warning signal	●
	#5	Black	Common 0V	○
	#6	Red	Valve DC+	●

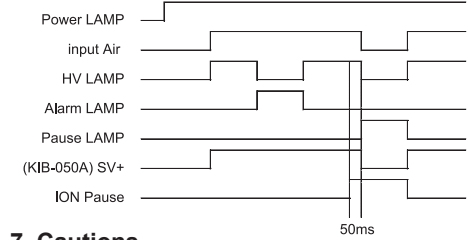
★ Note : ON/OFF of the power at the(V+) Note : pin#3 and pin#5, connect with body.

Connector structure

	#1 : ION Pause	#4 : Alarm output
	#2 : Power +DC24V	#5 : COM
	#3 : Power GND (0V)	#6 : SV+

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6. Time sequence diagram description



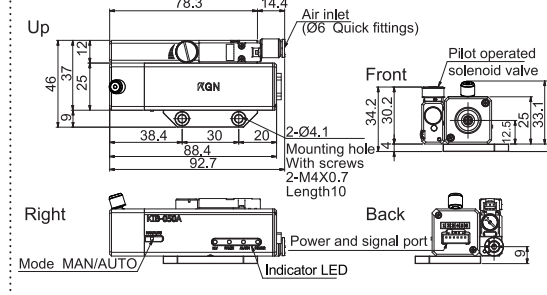
7. Cautions

- Please avoid installation at locations with moisture, oil vapor, dust, high temperature and high humidity. This product shall not be used at locations where explosive or flammable gas is present or where an explosion-proof measure is required.
- Disassembling is strictly prohibited: High voltage danger with the internal circuit and discharge needle. Do not disassemble this product by yourself.
- This model KIB-050 shall not be used alone but in conjunction with the air discharge nozzle, which shall be installed at the front of the body.
- Make sure that the power is off when replacing or cleaning the discharge needle and be careful not to be stung by the needle to be pricked.
- Do not disassemble the air discharge nozzle when the power is on to avoid high voltage danger.
- Electric Shock Danger
 - Never touch the discharge needle when energized
 - Be sure that grounding is properly executed
 - Switch off power before going ahead with service or maintenance

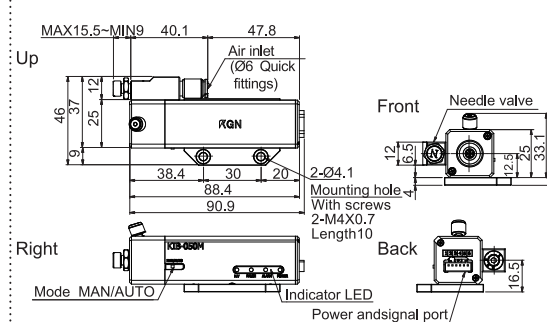
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Dimensions (Unit:mm)

KIB-050A



KIB-050M



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TROUBLESHOOTING

Conditions	Possible Causes	Remedy
Usually the "POWER" green light illuminates, but the "ALARM" red light often flashes.	Supplied compressed air contains excessive moisture and soot.	Wipe off the damp on the nozzle and the discharging stylus and check the demoiseure and deoil equipment for compressed air.
"POWER" green light does not illuminate.	Supplied air pressure exceeds the specified value Power is not connected The power connecting plug is not fully inserted into the main unit.	Reduce the air pressure (see the indicative value in the catalogue). Connect the power source, e.g KIC-06 Re-insert the power connecting plug.
No air is discharged.	The compressed air source is not open. The throttle valve on the body is fully closed.	Open the compressed air source. Turn counterclockwise to open the throttle valve.
The "ALARM" red light continuously turns on.	There are carbonous deposits or excessive crystals on the discharging stylus tip. Supplied compressed air contains excessive moisture and soot. The electrical circuit is broken.	Open the nozzle; clean the discharging stylus tip with a cotton swab after dipping in alcohol. Wipe off the damp on the nozzle and de-moisture and de-oil equipment for compressed air. Please contact the service center.

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