

KIB-025 使用說明書

1. 產品內容清單 (使用前, 請先確認包裝內容及附件)

- ① 本體含固定座 1 組
- ② 入出力訊號線組 (2M) 1 組
- ③ 放電針清潔刷 1 支
- ④ 使用說明書 本冊
- ⑤ 電源轉換器組 (KIC-03) 選購

2. 產品用途說明

KIB-025 以電暈放電產生離子, 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 $\pm 15V$ 以下。(使用標準噴嘴 KIB-N01S)
- 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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4. 規格表

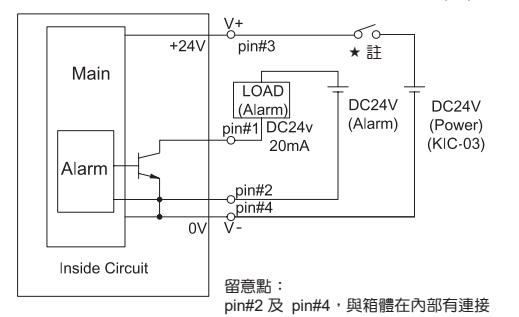
★本產品須搭配噴嘴使用, 噴嘴需另行購買。

KIB-025	
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	$\pm 15V$
LED動作 指示燈	電源 LED (Green) 異常 LED (Red)
警報輸出*3	NPN電晶體出力 20mA (Max.50)
臭氣量	0.03ppm 以下
空氣流量*4	約 170 l/min(ANR)
使用壓力範圍	0.05~0.5MPa 0.5~5.0kgf/cm ²
使用環境溫度	室內 0~40°C
入力電源	DC24V $\pm 5\%$
消耗電流	約 100mA
外型尺寸(本體) (WxDxH)	25x89x39 mm
重量(本體)	79 g
標準配件	入出力訊號線組(2M) 75 g 放電針清潔刷 1.4 g
★ 1. 使用時, 禁止於未供給氣源狀態下持續運轉。 ★ 2. 離噴嘴出口處300mm。 ★ 3. 警告出力, 僅供信號監控用, 請不要直接驅動負載。 ★ 4. 空氣流量係使用KIB-N01S噴嘴, 在0.5MPa條件下所得實測值。	

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5. 配線說明

入出力接線圖



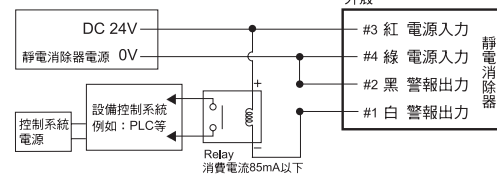
入力端子說明

- #4 #3 #1: Output
#2 #1 #2: GND
#3: DC+24V
#4: GND(0V)

入出力訊號線 (標準配件)

- [White 白]: Alarm output 警報出力
[Black 黑]: Alarm ground 警報接地
[Red 紅]: Power DC+24V 電源入力
[Green 綠]: Power ground 0V 電源接地

警報輸出變更為隔離接點之接線範例



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6. 使用方法

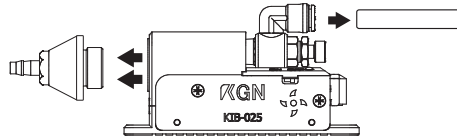
- ① 固定 KIB-025 本體及選購的噴嘴。接上電源、接地線及空氣壓配管。
- ② 通過過濾器的乾淨空氣 (由貴社提供), 並調整好符合噴嘴使用的壓力 (參考型錄上的規格), 插入 KIB-025 的入氣節流閥。
- ③ 開啟空氣源後, 打開電源開關, 暖機約 5 分鐘。
★通電中請勿關閉氣源★
(KIB-025 的入氣節流閥, 可調整空氣的流量)
- ④ 使用一段時間後, 放電針因濕氣產生結晶, 請關閉電源, 使用清潔刷清潔針尖。針尖若有積炭或髒污, 可用棉花棒或軟布沾酒精, 擦拭針尖。(詳見 7.)
- ⑤ 建議經常清潔放電針, 可延長針的使用壽命, 維持良好的離子平衡及除電效果。(在良好維護的情形下, 使用約 10,000 小時請更換放電針)
- ⑥ 紅色 LED 燈亮放電異常, 請聯絡服務人員, 切勿自行拆解。
- ⑦ 請注意: 噴嘴上之金屬部分, 不要碰觸到 電源 [0V] 及接地端。為加強固定噴嘴, 在噴嘴與接地之間, 請以絕緣物隔開。

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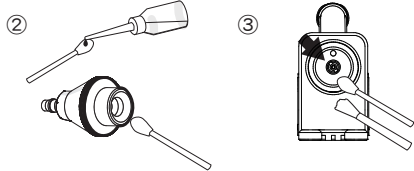
7. 維護

⚠ 請務必拔除電源!!

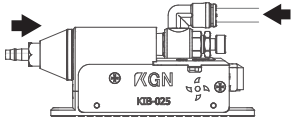
- ① 關閉電源 ➡ 移除空壓管 ➡ 拆掉噴嘴頭



- 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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8. 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-025 不可單獨使用, 須加裝空氣噴嘴。
⚠	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。
⚠	觸電危險: ① 通電中不要觸摸放電針 ② 實施配線、保養或維修, 請拔除電源 ③ 請務必做好接地

- ★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。



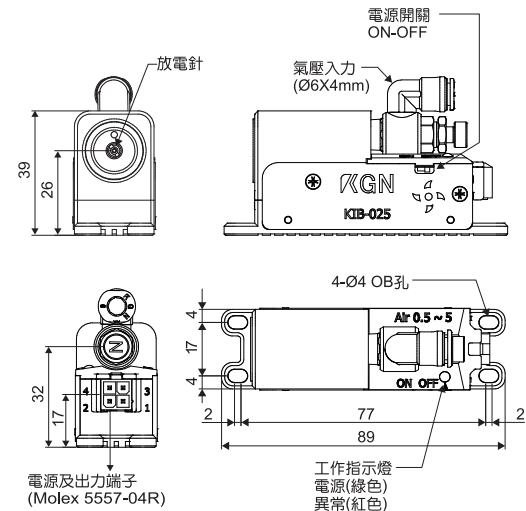
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KGN IONIZER 故障排除參考

Blow Type 狀況	可能原因	對策
關閉電源時, ALARM 燈會亮一下	正常	
POWER持續綠燈亮, ALARM 紅燈會經常閃爍	正常	請確認空氣壓的除油、除水設備
開啟電源後, POWER綠燈不會亮	供給的空氣壓含有過多的水氣、油氣 供給的空氣壓力超出規格值	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 請降低空氣壓的壓力 (參考型錄的標示值)
POWER綠燈不會亮	電源未接 電源入力端子未完全插入主機 本體上的開關未開	接上電源 例如: KIC-03 重新插好電源入力插頭 請打開開關
沒有空氣噴出	空氣壓源沒有打開 本體上的節流閥完全關閉	請打開空氣壓源 請逆時針旋轉, 開節流閥
ALARM 紅燈持續亮起	噴嘴的金屬部分, 碰觸到本體外殼、大量的導電或是被接地 放電針尖積碳或結晶過多 供給的空氣壓含有過多的水氣、油氣 電路故障	請避免噴嘴的金屬部分, 碰觸到任何金屬體或導電體 請打開噴嘴, 以棉花棒沾酒精清潔放電針尖 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 請聯絡服務處

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尺寸圖 (單位: mm)



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KIB-025 Instruction Manual

1. Product list

- ① Body including retaining base..... 1 Set
- ② Power and signal cable (2M)..... 1 Set
- ③ Cleaning brush..... 1 PC
- ④ Instruction Manual this manual
- ⑤ AC Adapter (KIC-03)..... Optional

2. Applications of this product

This static eliminator (Model No. KIB-025) 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

- ① Small volume, light weight, flow volume adjustable, convenient for desktop or inside-equipment applications.
- ② High frequency AC discharge, high density ion capable of infiltrating into cavities, hence thoroughly eliminating static electricity.
- ③ High accuracy ion balance to lower than $\pm 15V$ (Use standard KIB-N01S discharge nozzle)
- ④ High speed discharge in both short or long distance.
- ⑤ When abnormal discharge occurs, there will be a warning light and contact point output for effective monitoring and control.
- ⑥ Optional purchase of suitable air discharge nozzle according to actual requirement for your convenience.

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4. Specifications

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

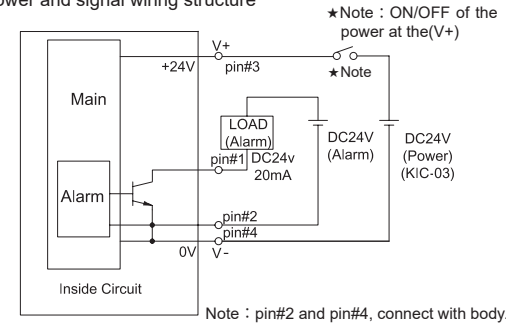
		KIB-025
Media*1		Air (Non-lubricated dry air)
Voltage at discharging pin		High-frequency AC Approximate 2KV, 72KHz
Ion Balance*2		$\pm 15V$
Indicator LED	Power Supply	LED (Green)
	Abnormality	LED (Red)
Warning output*3		Open collector (NPN) 20mA (Max.50)
Ozone volume		0.03ppm or less
Supply Air Flow Range*4		Approximate 170 l/min (ANR)
Operating Air Pressure Range		0.05~0.5MPa
Operating Environmental Temperature		indoor 0~40°C
Power Input		DC24V $\pm 5\%$
Current Consumption		Approximate 約 100mA
Overall Dimensions (Main Unit) (WxDxH)		25x89x39 mm
Weight (Main Unit)		79 g
Accessories	Power and signal cable (2M)	75 g
	Clean brush	1.4g

★ 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. For signal monitoring only, do not drive load directly.
★ 4. The airflow is according to the measured value under the 0.5MPa conditions with a KIB-N01S nozzle.

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5. Description of Wiring

Power and signal wiring structure



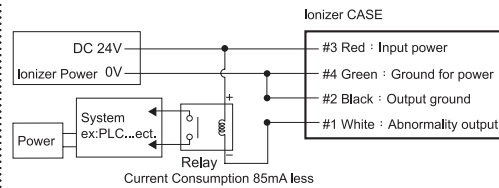
Connector structure

- #4 #3 #1 : Output
- #2 : GND
- #2 #1 #3 : DC+24V
- #4 : GND(0V)

Power and signal cable (Accessory)

- [White] : Alarm output
- [Black] : Alarm ground
- [Red] : Power DC+24V
- [Green] : Power ground 0V

The alarm output changes to the isolated relay output



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6. Operation

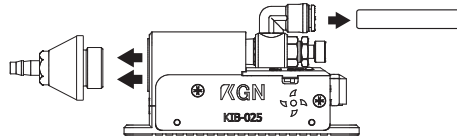
- ① Secure the main body of Model KIB-025 and the discharge nozzle. Connect the power, earthing wire and air pressure pipes.
- ② Filtered clean air (provided by user), adjust the pressure suited for the discharge nozzle. (refer to the specifications in the catalogue) and plug in the airflow throttle valve.
- ③ Turn on the air in advance when switching on the power, turn on the switch, warm up for five minutes. (Adjust the airflow using the airflow throttle valve)
- ④ After using the product for some time, crystallite will form on the discharge needle due to moisture. Please use a cleaning brush to clean the tip of the needle. Use a cotton wool or soft cloth damp with alcohol to clean the needle if it is stained with carbon residue or dust.
- ⑤ 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.)
- ⑥ 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.
- ⑦ Avoid the metal of the discharge nozzle to contact , [0V] of the power source and the earth electrode. Make sure the discharge nozzle is secured and insulate the discharge nozzle and the earth electrode.

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7. Maintenance

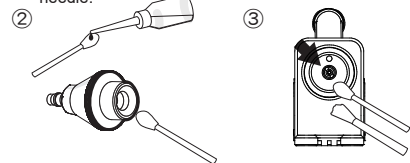
⚠ Be sure to unplug the power!

- ① Turn off the switch ➡ Remove the tube ➡ Remove the nozzle

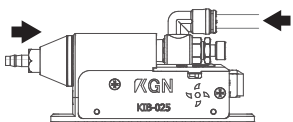


- ② Use a cotton wool with alcohol to clean the needle

- ③ Clean and remove any crystals from the needle, and then use a Static Brush to confirm if foreign matter is affixed to the needle.



- ④ Restore the nozzle and the com-pressive air pipe to complete the maintenance.



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8. Time sequence diagram description

⚠	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-proff 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-025 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 <ul style="list-style-type: none"> ⊙ Never touch the discharge needle when energized ⊙ Be sure that grounding is properly executed ⊙ Switch off power before going ahead with service or maintenance

- ★ Regular maintenance and cleaning of the Discharge Needle can reduce needle wear and prevent overload of the drive compon- ent 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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TROUBLESHOOTING

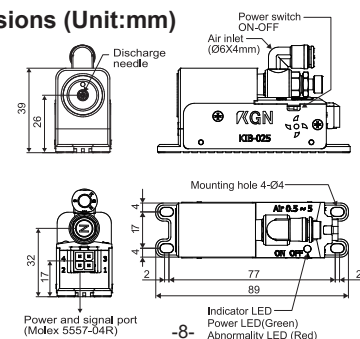
Blow Type Conditions	Possible Causes	Remedy
The "ALARM" light flashes when power is switched on/off.	Normal	
The "ALARM" red light flashes and immediately extinguishes.	Normal	Check the de-moisture and de-oil equipment for compressed air.
No air is discharged.	The compressed air source is not open. The throttle valve on the body is fully closed.	Open the compressed air source. Turn counterclockwise to open the throttle valve.
Usually the "POWER" green light illuminates, but the "ALARM" red light often flashes.	Supplied compressed air contains excessive moisture and soot. Supplied air pressure ex-ceeds the specified value	Wipe off the damp on the nozzle and the discharging stylus and check the demoisture and deoil equipment for compressed air. Reduce the air pressure (see the inductive value in the catalogue).
The power plug is well inserted, but the "POWER" green light does not illuminate.	Power is not connected The power connecting plug is not fully inserted into the main unit. The switch on the body is not acuated.	Connect the power source, e.g KIC-03 Re-insert the power connecting plug. Actuate the switch on the body.

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TROUBLESHOOTING

Blow Type Conditions	Possible Causes	Remedy
The "ALARM" red light continuously turns on.	The metal part of the nozzle contacts the body enclosure, a large conductor, or is being grounded.	Avoid the metal part of the nozzle to be in contact with any metal parts or a conductor.
	There are carbonous deposits or excessive crystals on the discharging stylus tip.	Open the nozzle; clean the discharging stylus tip with a cotton swab after dipping in alcohol.
	Supplied compressed air contains excessive moisture and soot.	Wipe off the damp on the nozzle and de-moisture and de-oil equipment for compressed air.
	The electrical circuit is broken.	Please contact the service center.

Dimensions (Unit:mm)



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