

# MCI™ SynAIRgPureMINI

AIOII-2, AIOII-4, AIOII-6, AIOII-8



Best Living Systems, LLC  
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# **AIOII-2**

**(Mini Duct Type Air Purifier)**

## **Installation, Operation and Maintenance Manual**



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# **AIOII-4 / AIOII-6**

**(Mini Duct Type Air Purifier)**

## **Installation, Operation and Maintenance Manual**



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# **AIOII-6 / AIOII-8**

**(Mini Duct Type Air Purifier)**

## **Installation, Operation and Maintenance Manual**



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# 1. Introduction

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## 1.1 Disclaimer

These instructions are submitted with the implicit understanding that:

- 1.1.1 This manual is to guide the user of SPE equipment in the proper installation, operation and maintenance procedures to insure maximum equipment life with efficient operation.
- 1.1.2 The customer has assigned competent maintenance and operating personnel to the system described herein and will assume operational and maintenance responsibility upon start-up of the system.
- 1.1.3 The customer will read and thoroughly examine the foregoing instructions and will notify the seller of any points not fully understood, points of conflict or error.
- 1.1.4 The customer, in lieu of any notification to the contrary, has read and fully understands the operation of the system and is aware of the hazards of corrosion, abrasion, and fire or explosion and shall take the necessary steps in the operation of equipment to control such hazards to the maximum extent possible.
- 1.1.5 Start-up assistance or field engineering service provided by SPE shall in no way relieve the customer of responsibility for the proper operation of the system.

***IMPORTANT: Any modifications to the unit by unauthorized personnel will void factory warranty. The unit must be installed in accordance with the manufacturer's instructions to preserve warranty.***



# 1. Introduction

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## 1.2 Receiving

Products leaving the SPE factory are inspected and in satisfactory operating condition. All equipment should be thoroughly inspected when received. Although all units are properly packaged, rough handling in transit can cause breakage. Any shortage or damage should be reported at once to the transportation company. Note the damage on the bill of lading before signing for the shipment. **No equipment may be returned to SPE without written authorization. Returned equipment sent without authorization will be refused and returned to sender.** All products are shipped F.O.B. (Ex-Works, FCA) SPE warehouse. Responsibility for all equipment passes to the Buyer at the time equipment is loaded onto the carrier's truck.

## 1.3 Storage

If the SPE DI unit(s) is not installed upon delivery, it should be stored in a cool, dry, weather protected location. Do not stack any other equipment on top of the unit.

## 1.4 Warranty

THE SELLER WARRANTS THE EQUIPMENT AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL FOR FIFTEEN (15) MONTHS FROM DATE OF FACTORY SHIPMENT OR ONE (1) YEAR FROM COMMISSIONING, WHICHEVER OCCURS FIRST.

IN THE FULFILLMENT OF ITS WARRANTY, THE SOLE OBLIGATION OF SELLER SHALL BE TO REPAIR OR REPLACE, AT ITS OPTION, F.O.B. ITS FACTORY, ANY PART OR PARTS WHICH ARE RETURNED F.O.B. ITS FACTORY, SHIPPING CHARGES PREPAID, AND WHICH AFTER INSPECTION BY SELLER ARE FOUND TO BE DEFECTIVE.

BUYER SHALL NOTIFY SELLER OF DEFECT IN WRITING, PROMPTLY UPON DISCOVERY AND WITHIN THE WARRANTY PERIOD. THIS WARRANTY DOES NOT COVER DEFECTS CAUSED BY CORROSION OR NORMAL DETERIORATION; IT DOES NOT EXTEND TO CONSEQUENTIAL DAMAGE, LOSS OR DELAY ASSOCIATED WITH A WARRANTY DEFECT; AND IT DOES NOT COVER ANY COST OF LABOR, TRAVEL, OR OTHER EXPENSE ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.

# 1. Introduction

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SELLER ASSUMES NO LIABILITY FOR PRODUCT LOSS OR OTHER CLAIMS WHATSOEVER ARISING OUT OF THE USE OR APPLICATION OF THE EQUIPMENT IN ANY OPERATIONS, WHETHER THE MACHINE IS USED ALONE OR IN CONJOINT USE WITH OTHER EQUIPMENT OR PROCESSES. NOTWITHSTANDING THE FOREGOING, SELLER'S WARRANTY OBLIGATIONS WITH RESPECT TO ANY ITEMS NOT MANUFACTURED BY SELLER SHALL NOT EXCEED THE OBLIGATIONS UNDERTAKEN BY THE MANUFACTURER THEREOF UNDER EXPRESS WARRANTY TO THE SELLER. THIS EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OF FITNESS OF THE MACHINE FOR ANY PARTICULAR PURPOSE.

THERE ARE NO OTHER REPRESENTATIONS, WARRANTY OF CONDITION IN ANY RESPECTS EITHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE IN CONTRACT OR TORT, OTHER THAN WHAT IS STATED ABOVE. THE SELLER SHALL NOT BE HELD LIABLE IN ANY WAY FOR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED.

THIS WARRANTY WILL NOT APPLY IF THE SELLER'S EQUIPMENT HAS BEEN DAMAGED DUE TO IMPROPER INSTALLATION, ALTERATION, ABUSE OR MISUSE, ACCIDENT, FIRE, FLOOD OR ACT OF GOD. FURTHER, THIS WARRANTY WILL NOT APPLY IF REPAIRS, REPLACEMENTS, OR ALTERATIONS ARE MADE BY OTHERS WITHOUT THE SELLER'S PRIOR WRITTEN AUTHORIZATION.

IN THE EVENT THE STATE IN WHICH THE EQUIPMENT IS INSTALLED DOES NOT PERMIT THE LIMITATION OR EXCLUSION OF IMPLIED WARRANTIES OR CONDITIONS UNDER GIVEN CIRCUMSTANCES, THE PROVISIONS OF THIS WRITTEN WARRANTY ARE IN ADDITION TO AND NOT A MODIFICATION OF THE STATUTORY WARRANTIES AND OTHER RIGHTS AND REMEDIES PROVIDED BY SUCH LAWS.



# 1. Introduction

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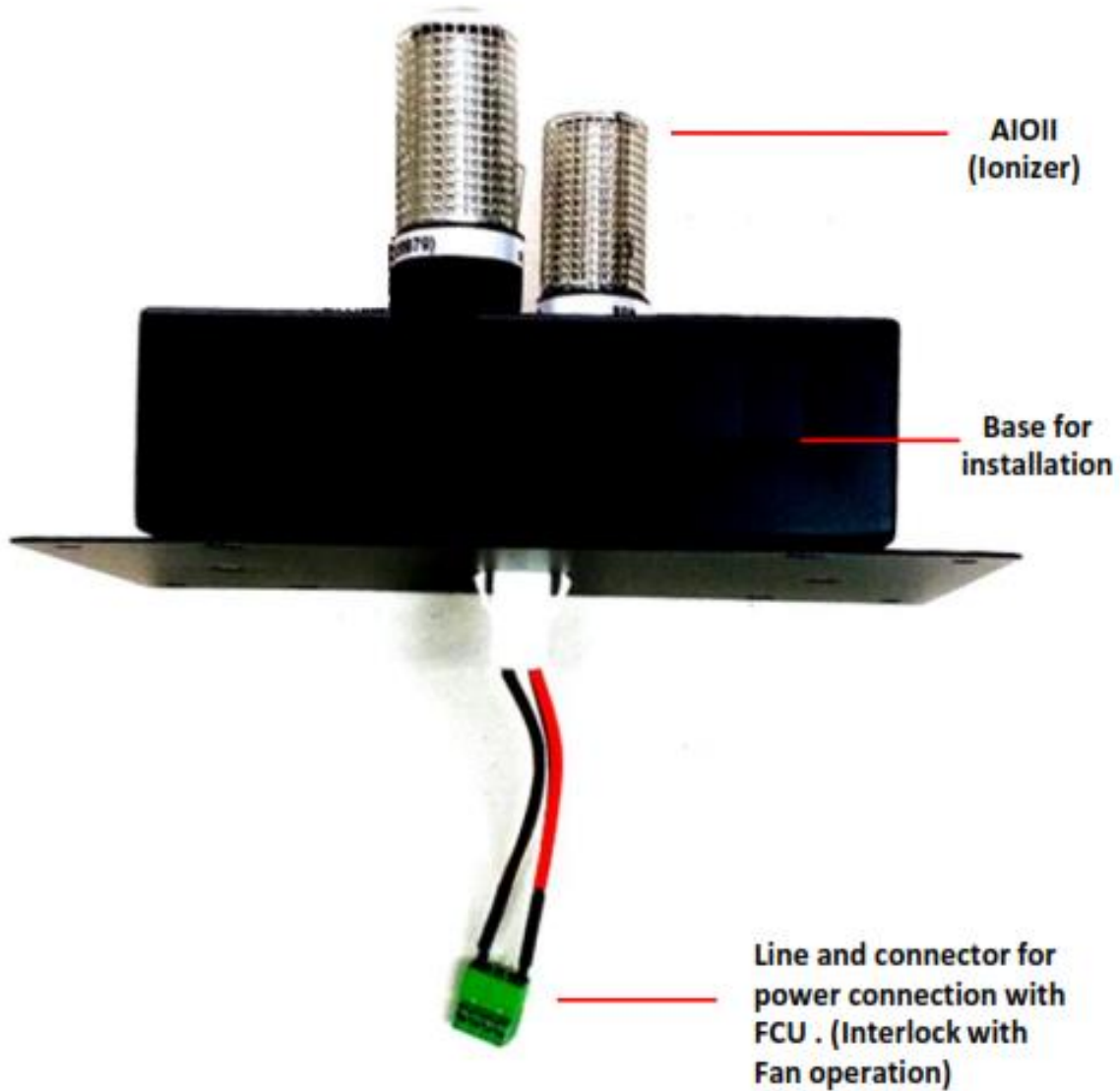
**NOTE:**

“ANY MODIFICATION TO ORIGINAL EQUIPMENT BY ANY COMPANY OR PERSON OTHER THAN THE MANUFACTURER WILL SERVE TO CANCEL AND VOID ALL OF THE SELLER’S LIABILITY UNDER THE MANUFACTURER’S WARRANTY. ENCLOSURES CONTAINING ELECTRONIC COMPONENTS ARE NORMALLY SEALED BY THE MANUFACTURER TO PREVENT UNAUTHORIZED TAMPERING OR ADJUSTMENTS.

ONLY AUTHORIZED SERVICE PROVIDES MAY BREAK SEALS TO COMPLETE CALIBRATION OR TO TROUBLE SHOOT THE UNIT. UNAUTHORIZED TAMPERING OR BREAKING SEALS WILL RELEASE THE SELLER FROM ANY FUTURE LIABILITY UNDER THE WARRANTY”.

## 2. AIOII-2/ 4 at a Glance

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\* AIOII-2 : AIOII (Ionizer) 2 units

### 3. Installation Instructions

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*Read instructions in entirety before proceeding.*

- *Installation is recommended to be performed by a licensed professional.*
- *Do not open base unit.*

#### 3.1 Components

Socket for AI0II insertion



Base for installation

### 3. Installation Instructions

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**AIOII-2 : AIOII (Ionizer) 2 units**



**Line and connector for power connection with FCU**

## 3. Installation Instructions

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### 3.2 Assembly

Connect the line and connector to the frame.  
(White connector should be connected to the base.)



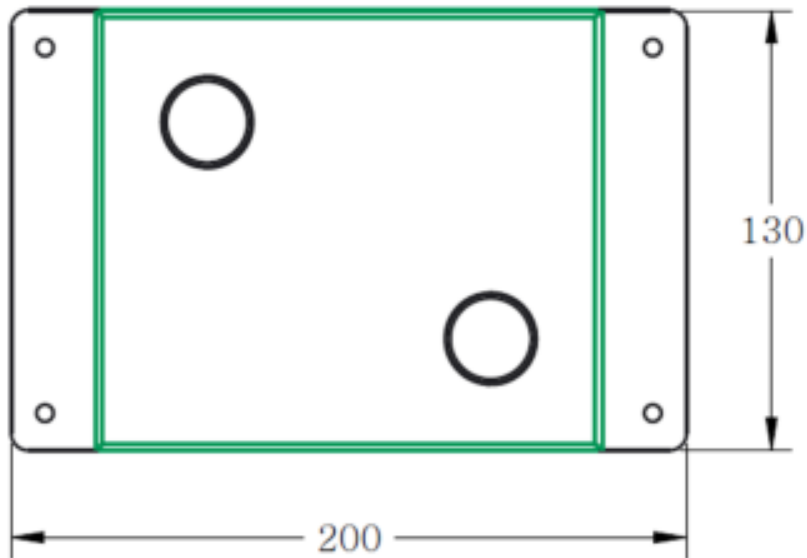
Red line is for plus and black line is for minus.  
(This unit is for DC12V Input).



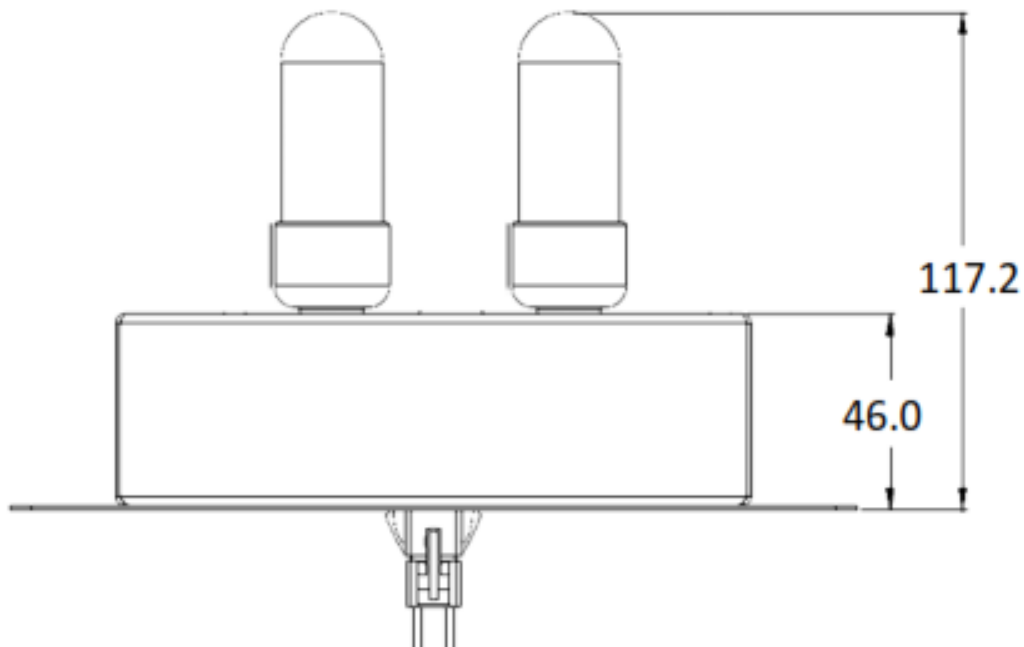
### 3. Installation Instructions

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#### Frame with socket for AIOII insertion



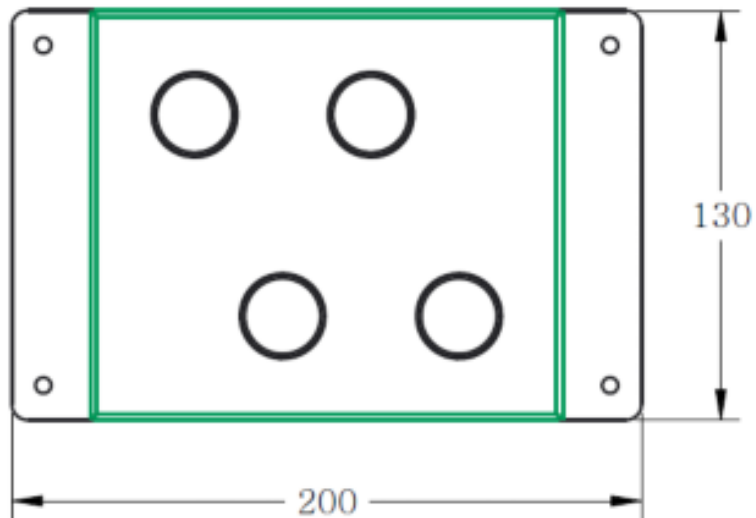
**Insert AIOII to the socket of the base unit.  
Push and turn it to the right or to the left by 90 degree.  
And pull AIOII out until it is locked.  
(After locking, unless you push it, you can not turn it around.)**



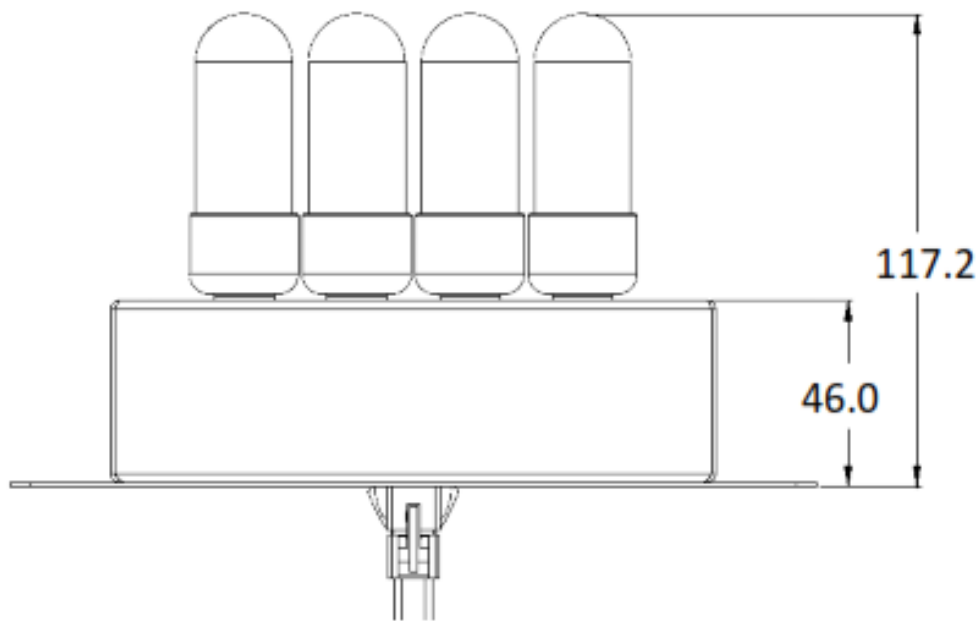
### 3. Installation Instructions

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#### Frame with socket for AIOII insertion



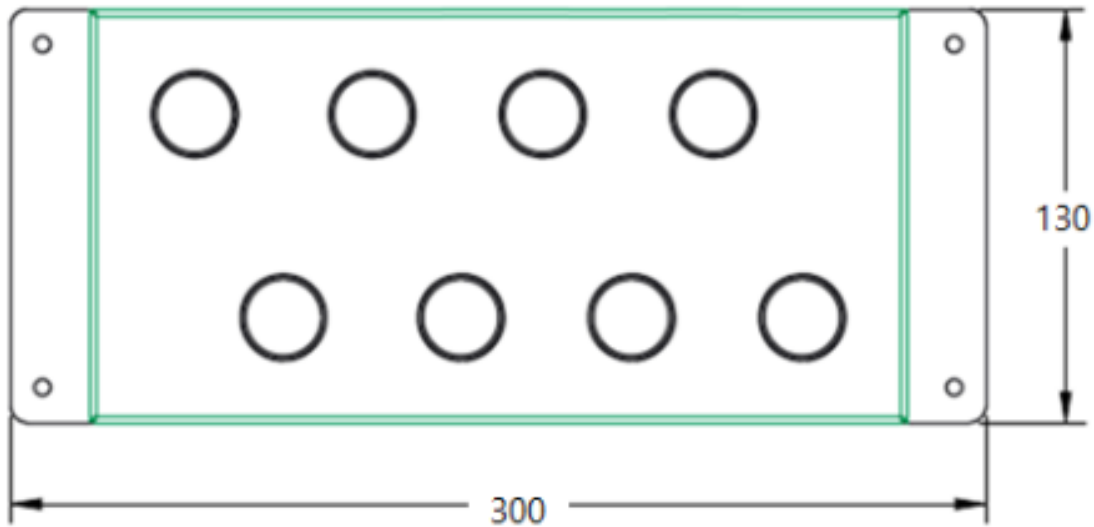
**Insert AIOII to the socket of the base unit.  
Push and turn it to the right or to the left by 90 degree.  
And pull AIOII out until it is locked.  
(After locking, unless you push it, you can not turn it around.)**



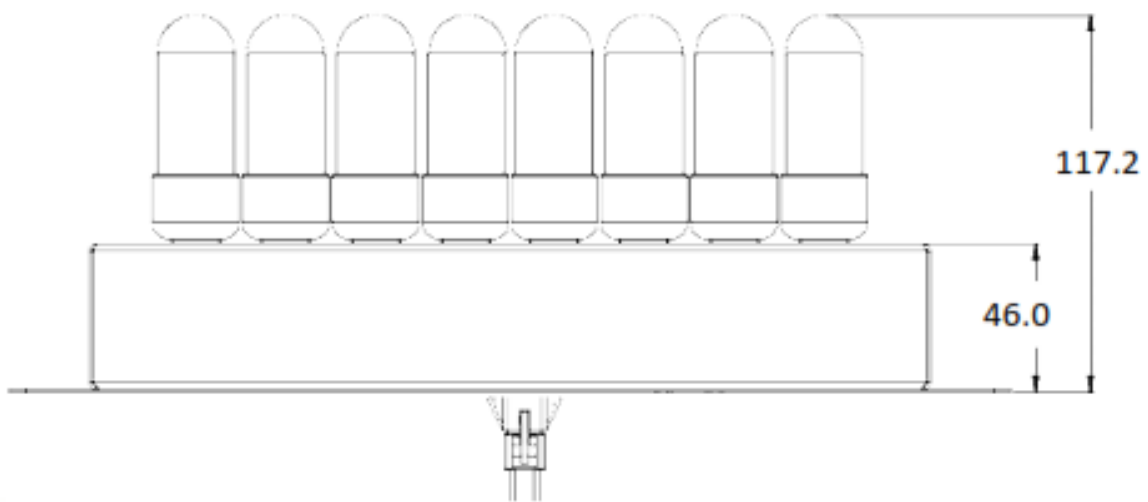
### 3. Installation Instructions

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#### Frame with socket for AIOII insertion



**Insert AIOII to the socket of the base unit.  
Push and turn it to the right or to the left by 90 degree.  
And pull AIOII out until it is locked.  
(After locking, unless you push it, you can not turn it around.)**



## 3. Installation Instructions

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### 3.3 Installation and Operation Instructions

- 3.3.1 AIOII-2/4/6 is specially designed bipolar ionizer for FCU for hotel room.
- 3.3.2 We recommend that AIOII-2/4/6 should be placed between filter and FCU in order to prevent any condensation issue and to minimize the loss of ion cluster to keep its efficiency stable.
- 3.3.3 And as it is most important to clean discharge tubes regularly to keep its efficiency, it should be installed at the place where easy access for maintenance is possible.

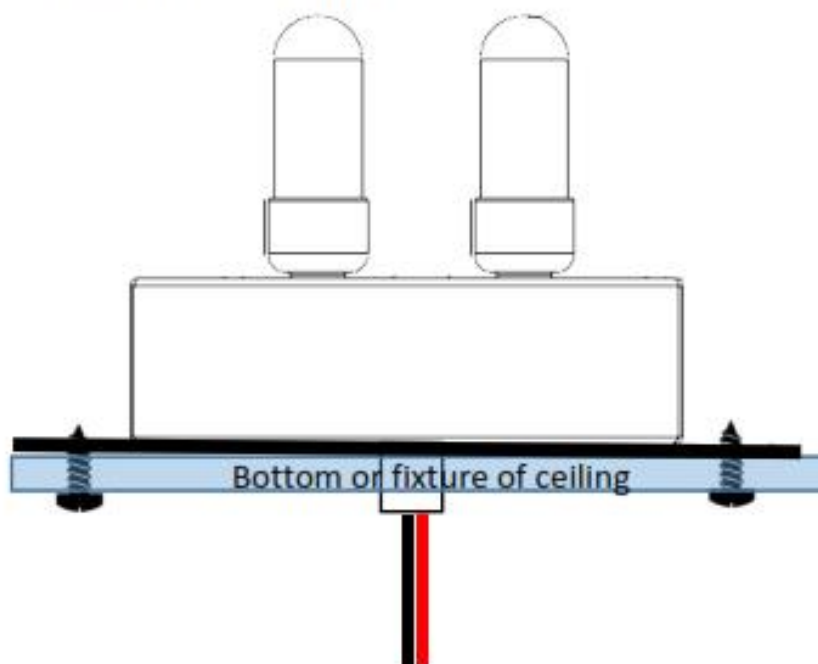
**3.3.4. In order to keep ozone level safe, the operation of AIOII-2/4 should be inter-locked with the operation of FCU.**

- 3.3.5. Operation Condition :
- Power : DC 12V[V]  $\pm$ 5%, (Input Current : Minimum 600mA)
  - Temperature : 0°C ~ 40°C
  - Humidity : 30% ~ 70% RH

### 3. Installation Instructions

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#### Installation Sample



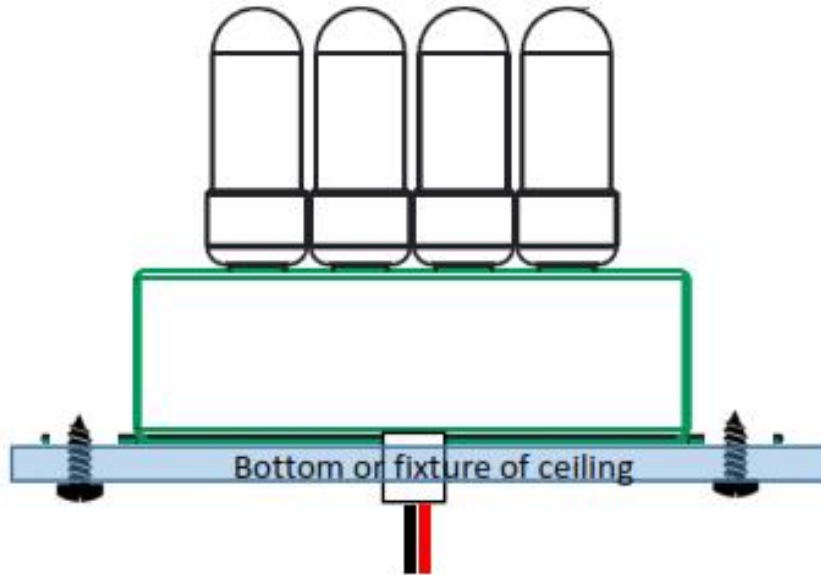
Once the power is connected, there will be blue LED light inside ionization tube in 5 seconds.



### 3. Installation Instructions

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Installation Sample

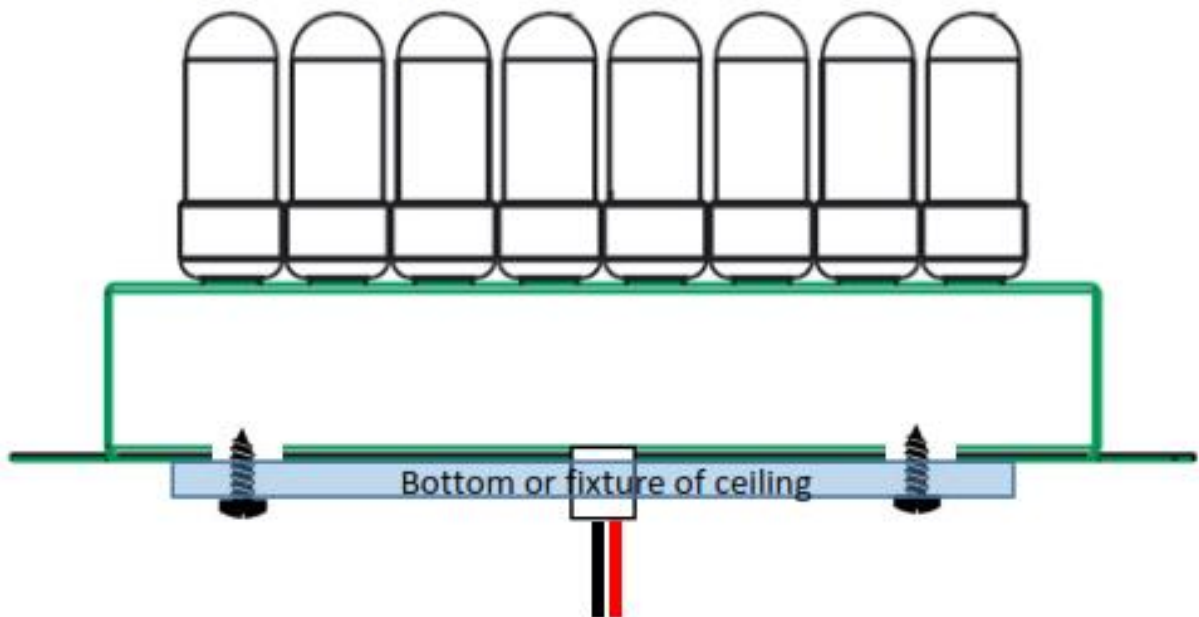


Once the power is connected, there will be blue LED light inside ionization tube in 5 seconds.

### 3. Installation Instructions

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Installation Sample



Once the power is connected, there will be blue LED light inside ionization tube in 5 seconds.

## 4. Maintenance

4.1 The discharge tubes should be cleaned on a periodic basis to restore operating efficiency. Assuming that the recommended type filter has been installed, it is recommended to clean tubes once every three (3) months.

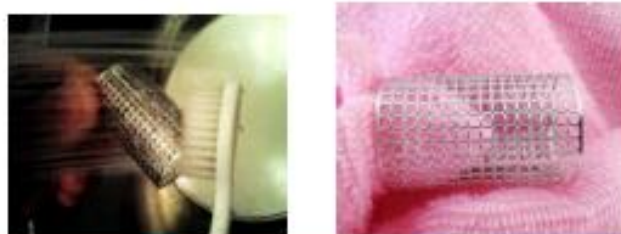
4.1.1 Disconnect the power line and connector from the base unit. Remove the discharge tubes from the base, by pushing iand turning the tube 90 degree and pull it out.



4.1.2. Pull up the ground pin and take out the exterior mesh carefully from the discharge tube.



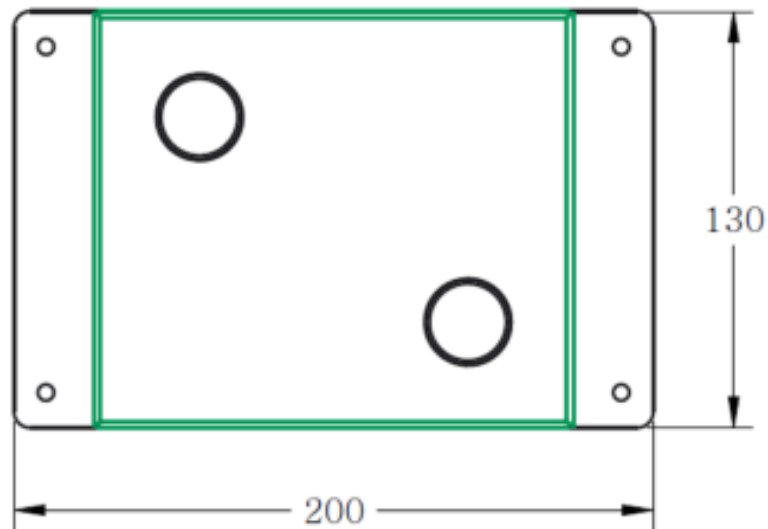
4.1.3. Clean the exterior mesh with brush. If there is grease particle on the mesh, wash it with detergent (soap) and water and dry it.



**CAUTION: Repair of AIOII unit should not be attempted except by our factory authorized personnel. If there is no blue light inside AIOII tube, it should be sent to factory for repair or replacement.**

## 5. Specifications

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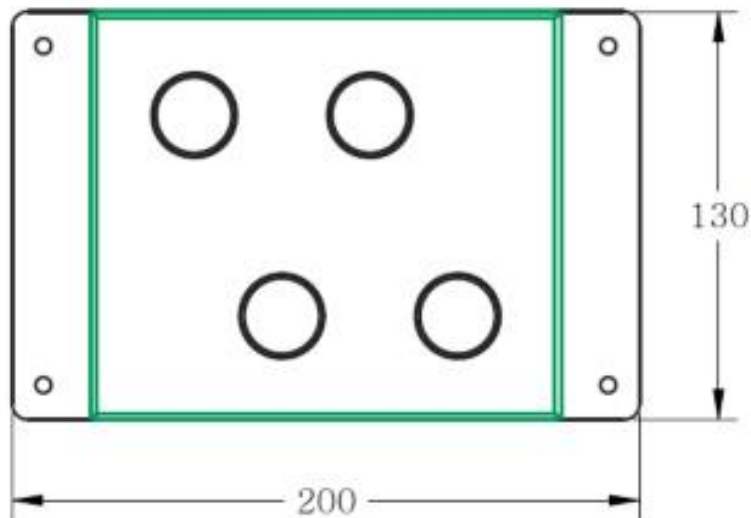


Model	AIOII -2
Structure	AIOII 2 units with base
Size (mm) / Weight	200(W) × 130(H) × 117.2(D) / 460g
Input Voltage	
Power Consumption	3 Watt / 400mA
Recommended Air Flow	400~800 CMH
Minimum Ventilation for O3 safety	120 CMH

\* Maximum operating temperature : 55°C

※ Product specification can be changed without notice to improve quality.

## 5. Specifications



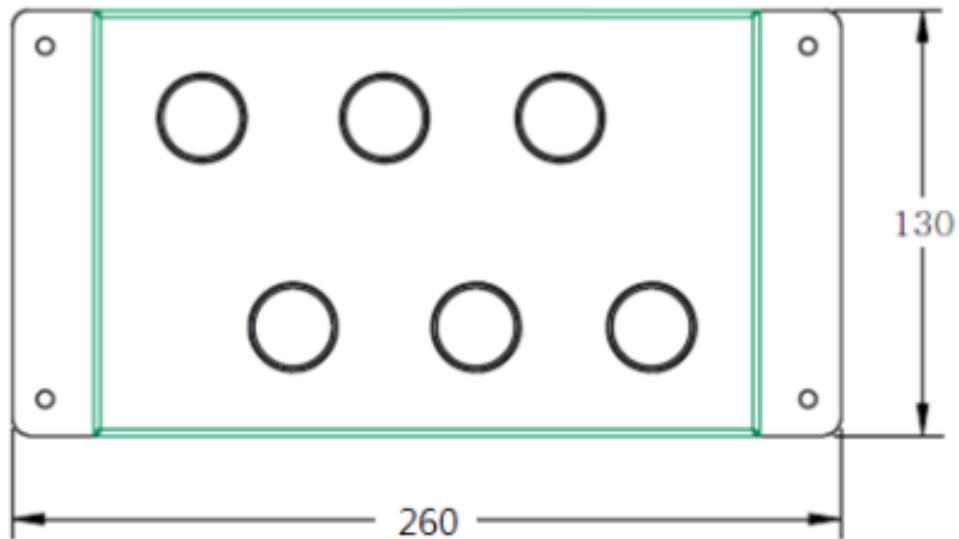
Model	AIOII -4
Structure	AIOII 4 units with base
Size (mm) / Weight	200(W) × 130(H) × 117.2(D) / 500g
Input Voltage	DC 12V
Power Consumption	6 Watt / 800mA
Recommended Area	80m <sup>2</sup> ~ 200m <sup>2</sup> (depending on air flow)
Recommended Airflow	400 CMH ~ 1,400 CMH (based on office area)
Minimum Ventilation	240 CMH

\* Maximum operating temperature : 55°C

※ Product specification can be changed without notice to improve quality.



## 5. Specifications

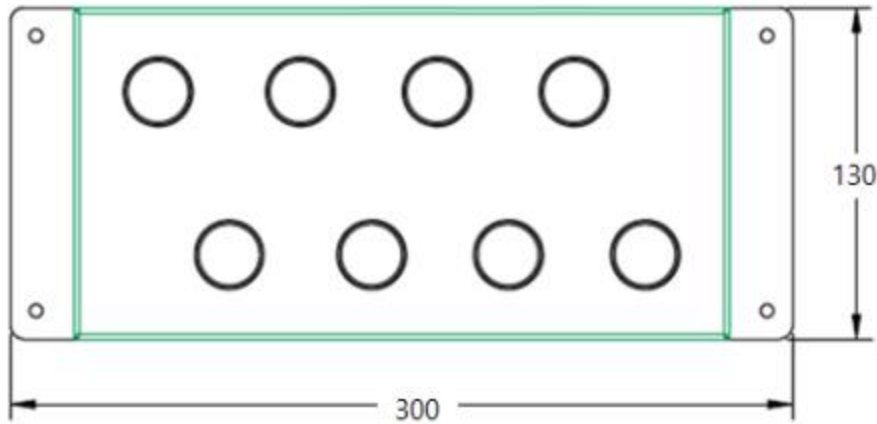


Model	AIOII -6
Structure	AIOII 6 units with base
Size (mm) / Weight	260(W) × 130(H) × 117.2(D) / 630g
Input Voltage	DC 12V
Power Consumption	9 Watt / 800mA
Recommended Area	80m <sup>2</sup> ~ 200m <sup>2</sup> (depending on air flow)
Recommended Airflow	600 CMH ~ 2,100 CMH (based on office area)
Minimum Ventilation	360 CMH

\* Maximum operating temperature : 55°C

※ Product specification can be changed without notice to improve quality.

## 5. Specifications



Model	AIOII -8
Structure	AIOII 8 units with base
Size (mm) / Weight	300(W) × 130(H) × 117.2(D) / 1000g
Input Voltage	DC 12V / AC100~240V
Power Consumption	12 Watt / 800mA
Recommended Airflow	1600 CMH ~ 3200 CMH (based on office area)
Minimum Ventilation	480 CMH

\* Maximum operating temperature : 55°C

※ Product specification can be changed without notice to improve quality.