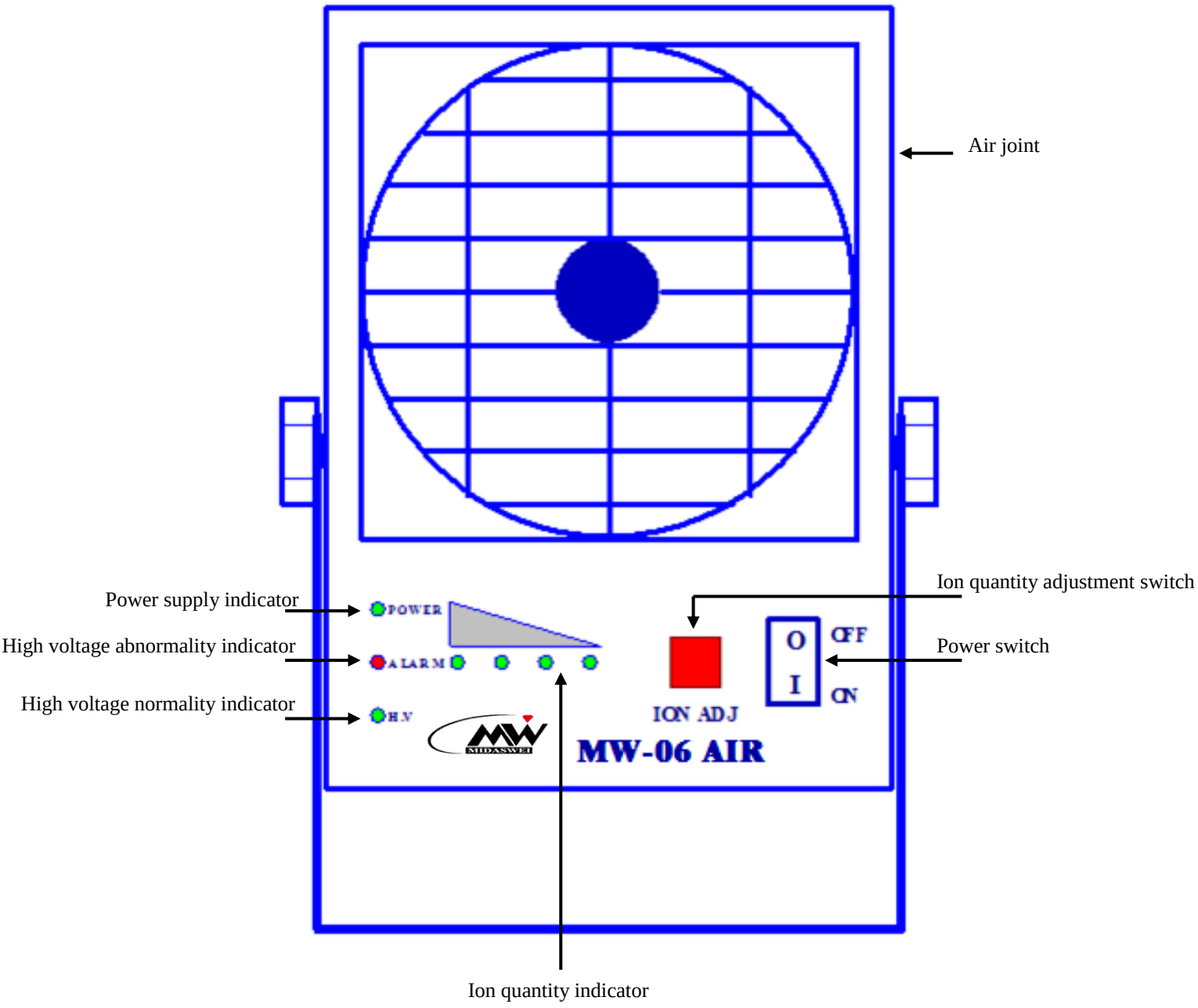
Midaswei Trading Co., Ltd.

Midaswei MW-06 AIR Ionizer Specification

Address: Room A, 9F, No.33, Sec.2 Roosevelt Road, Taipei 10643, Taiwan, R.O.C
Tel: 886-2-2396-5048
Contact e-mail: midas001@midaswei.com

A. Overview



Applications:

Semiconductor industry- wafer

B. Operating instructions

MW-06 AIR is a fan-less ionizer with five-stage adjustable ions quantity, adjustable air volume by air purge system and a protection of high voltage output abnormal. By using with the accessory AC adapter, MW-06 AIR is suitable for 110Vac/220Vac supply voltage.

1. AC adapter installation

Please connect the plug of the accessory AC Adapter with 110Vac/220Vac power outlet, and insert the output of the AC Adapter into DC IN connector on the back of MW-06 AIR. Note: do NOT use non- accessory AC adapters.

2. Operation

MW-06 AIR is an ionizer with sequentially five-stage adjustable ions quantity. The operation rule is as follows,

2.1 Connecting compressed air

An air tube joint in side of MW-06 AIR, plug in φ4mm air tube and supply 0.1~0.5Mpa dried-clean air.

2.2 Initial Stage

Turn the power switch ON, 'POWER' LED and 'H.V.' LED become light up. The ion number is zero in initial stage.

2.3 First stage

Push the ion quantity adjustment switch (ION ADJ) in the initial stage, MW-06 AIR will enter into first stage. The buzzer will beep once. The 'POWER' LED, 'H.V.' LED and four LEDs of ion quantity indicator become light up. The generated ion number is largest in first stage.

2.4 Second stage

Push the ion quantity adjustment switch (ION ADJ) in the first stage, MW-06 AIR will enter into second stage. The buzzer will beep once. The 'POWER' LED, 'H.V.' LED and right-hand side three LEDs of ion quantity indicator become light up. The generated ion number is secondly large in second stage.

2.5 Third stage

Push the ion quantity adjustment switch (ION ADJ) in the second stage, MW-06 AIR will enter into third stage. The buzzer will beep once. The 'POWER' LED, 'H.V.' LED and right-hand side two LEDs of ion quantity indicator become light up. The generated ion number is medium in third stage.

2.6 Fourth stage

Push the ion quantity adjustment switch (ION ADJ) in the third stage, MW-06 AIR will enter into fourth stage. The buzzer will beep once. The 'POWER' LED, 'H.V.' LED and rightmost LEDs of ion quantity indicator become light up. The generated ion number is little in fourth stage.

2.7 Initial stage

Push the ion quantity adjustment switch (ION ADJ) in the fourth stage, MW-06 AIR will re-enter into initial stage. The buzzer will beep once, no ion output.

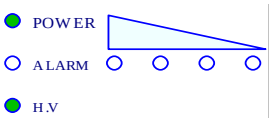
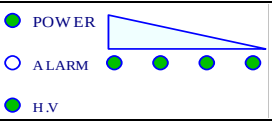
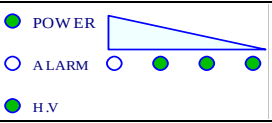
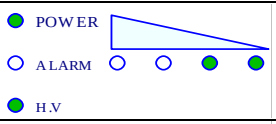
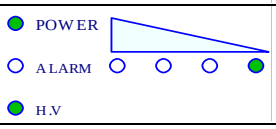
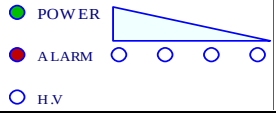
3. Abnormal condition

3.1 When the output high voltage is abnormal, such as the internal cable has poor connection or the electrode needle unit does not discharge, the 'ALARM' LED becomes light up and the buzzer sounds. If this abnormal condition is not solved within 1 minute, MW-06 AIR will be locked.

3.2 When the foreign object contacts the electrode needle unit, 'ALARM' LED becomes light up and the buzzer sounds. If this abnormal condition is not solved within 1 minute, MW-06 AIR will be also locked.

3.3 Holding the ion quantity adjustment switch (ION ADJ), the buzzer sounds until release the ion quantity adjustment switch.

4. Indication/Function

Stage	Ion quantity	LED indication	Buzzer
Power ON (Initial stage)	zero		Stop
1st stage	Largest		Beep
2nd stage	Secondly large		Beep
3rd stage	Medium		Beep
4th stage	Little		Beep
Hold ION ADJ		Keep original state	Raise alarm
High voltage abnormality			Raise alarm

C. Specification

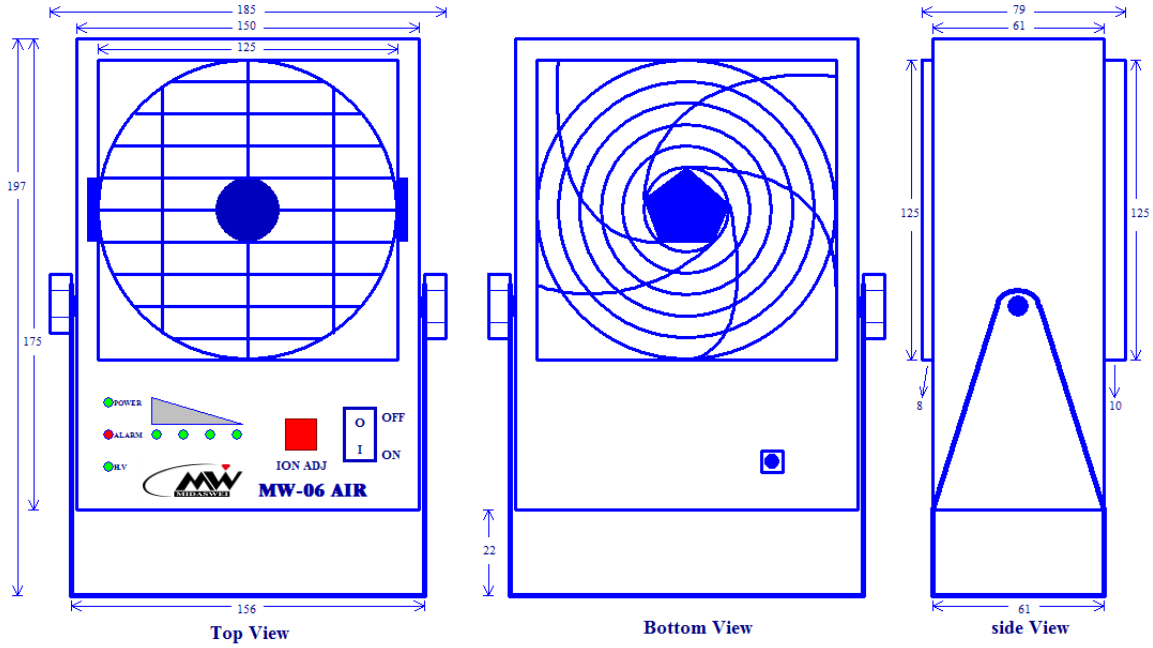
Name	MW-06 AIR
Power supply voltage	Accessory AC adapter: Input: 100Vac~240Vac, Output: DC24V
Input power	**<10W**
High voltage output	AC 4400V (approx.)
Static charge removal time[*1]	**±1KV→±100V within 1 seconds at distance of 20cm central position**
Balance Voltage [*2]	**±2V at 20cm central position**
Air flow	3.84 L/min (0.5Mpa)
Air pressure range	0~0.5Mpa
Air joint dimension	φ4mm
Quantity of produced ozone	0.05ppm or less (testing distance 30cm)
Ambient temperature	0~40℃
Ambient humidity	35~65％RH (No condensation)
Dimension	185(L)×79(W)×197(H)mm (including protruding portion)
Weight	1550g approx. (including stand, ±10%)
Noise	<50 dB(A) @1m
Accessory	Instruction manual, AC Adapter and power cable.

Note: *1 Testing instrument is EFM022 @25℃, 40%RH.

*2 Balance voltage measurement distance is within 20cm, The EFM022 perpendicular air flow, air pressure is 0.5Mpa.

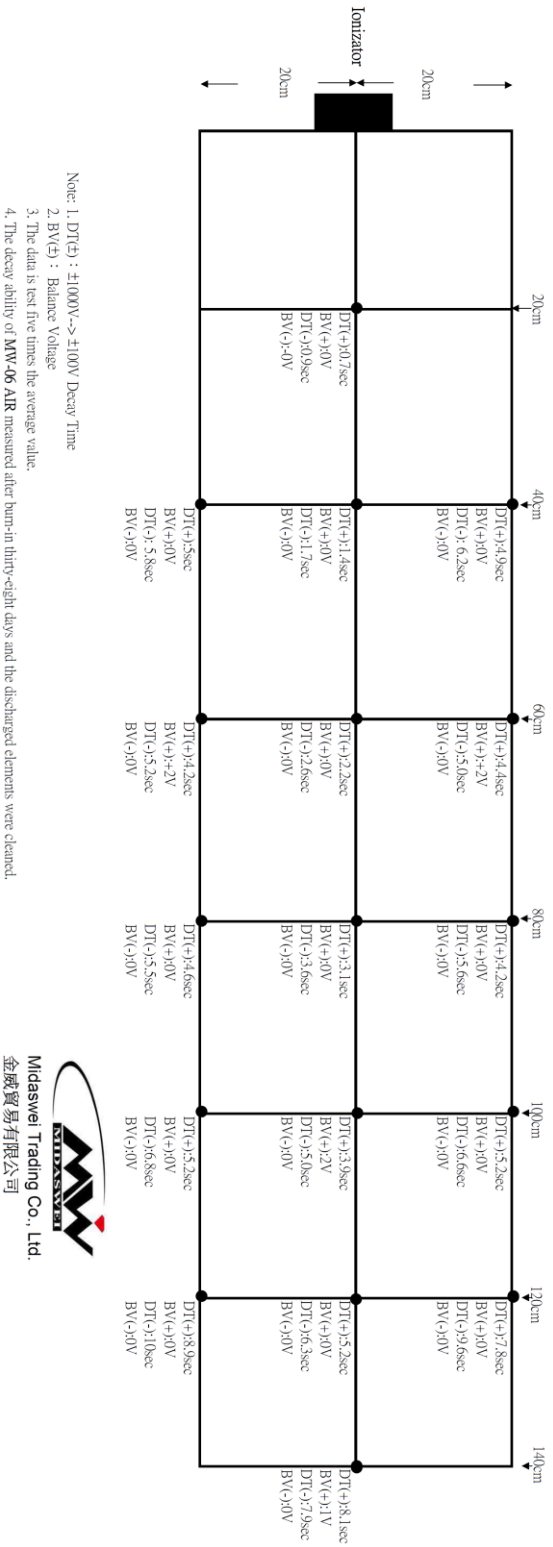
*3 Performance may be degraded, depending on working conditions and surrounding environment.

D. Dimensions



Unit: mm

E. MW-06 AIR Decay Ability (2018/08/20)



Note: 1. DT(±) : ±1000V-> ±100V Decay Time
2. BV(±) : Balance Voltage
3. The data is test five times the average value.
4. The decay ability of **MW-06 AIR** measured after burn-in thirty-eight days and the discharged elements were cleaned.

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F. Safety Precaution

1. Please read the instruction manual before installation.
2. Both side louvers cannot be blocked or inserted by any foreign object.
3. Do NOT use any non-accessories AC adapter.
4. Do NOT use the ionizer in a flammable or explosive environment.
5. Do NOT replace any part or attempt to self-repair.
6. Under normal use and proper care, we provide one-year warranty for MW-06 AIR. However, consumables (discharge needles, filter cotton, etc.) are NOT within warranty.
7. Must use genuine discharge needle hub or discharge needle, or unpredictable dangers may occur.
8. When the ionizer is working, it generates a high voltage. Do not use it when each louver is taken off.
9. The ionizer generates ozone in operation. Ventilation is required when operating in a confined space.
10. Midaswei ionizer is designed for general industrial and indoor use. They are not suitable for outdoor use as well as not suitable for environments that cause life or property safety, such as nuclear power plants, aircrafts, ships or hospitals.
11. Avoid operating the ionizer in the following locations: locations with soot, dust, flammable substances, acid-base solvent or gas, vibration, impact, strong magnetism, strong electric fields, and drastic changes in temperature.

G. Cleaning and Maintenance

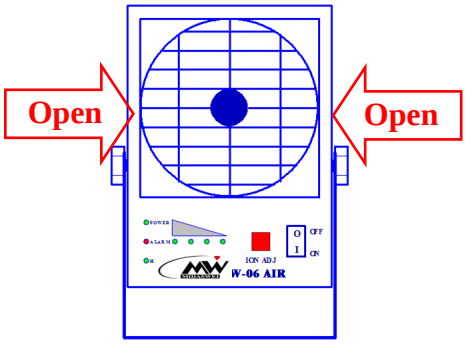
1. 1. Clean the discharge needle by a soft brush at least once a week. Do NOT clean the discharge needle by any hard object, or the needle tip will be damaged.
2. If the needle tip is damaged, replace the discharge needle unit immediately to maintain proper function.
3. The discharge needle may have carbon deposits and consumption due to corona effect. It is recommended to replace the discharge needle unit every 3 months or when the static elimination performance is degraded.
4. Clean front side louvers by a soft brush or compressed air at least once a week.

CAUTION:

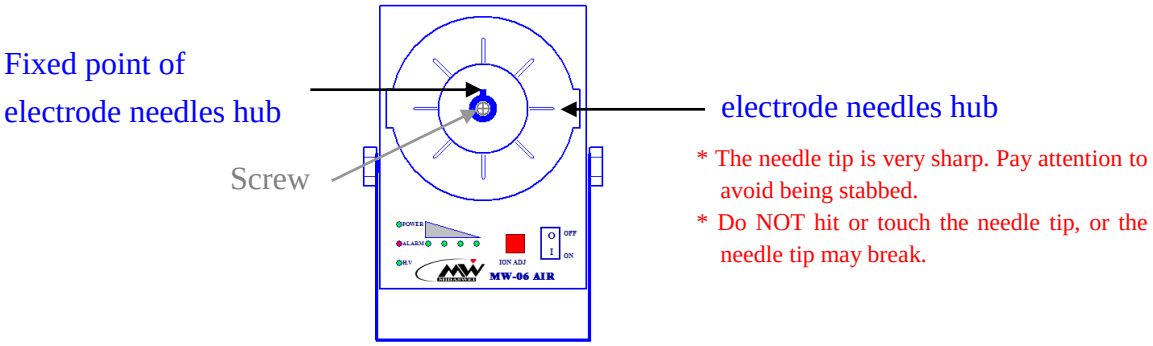
* You should always turn OFF the power before maintaining the ionizer.
* The needle tip is very sharp. Pay attention to avoid being stabbed.

H. Replacing Electrode needle hub of MW-06 AIR

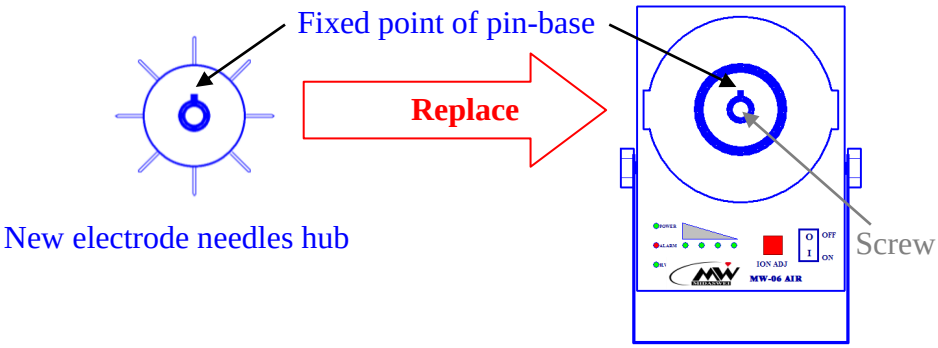
Step 1. Open fan cover



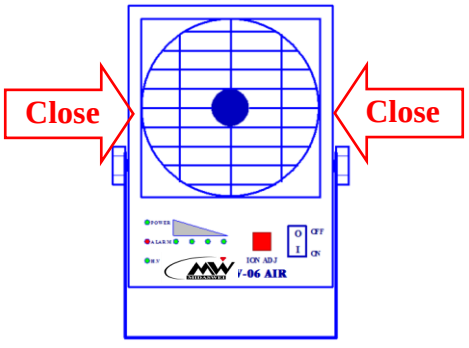
Step 2. Pick-up the screw and electrode needle hub



Step 3. Replace the new electrode needle hub and fix the screw

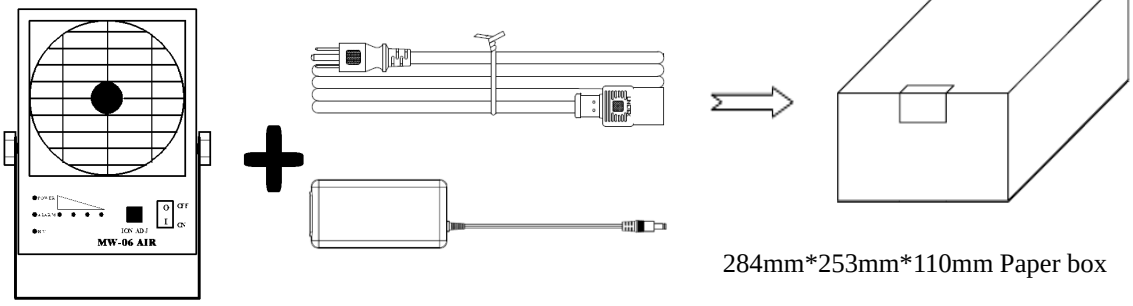


Step 4. Close fan cover

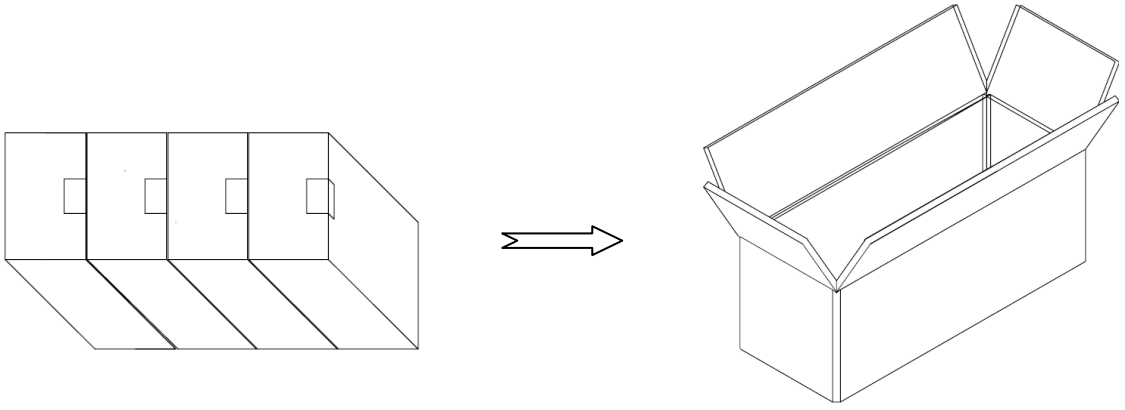


I. Packaging

1. Each Ionizer set includes a MW-06 AIR, a Power adaptor and a Power cord.
2. Place an Ionizer set in the 284mm*253mm*110mm paper box。
3. 4 PCS 284mm*253mm*110mm paper box is 1 stack。
4. 497mm*337mm*293mm carton can be put into 4 paper box.



284mm*253mm*110mm Paper box



497mm*337mm*293mm carton

ITEM	NAME	Qty	pcs
01	MW-06 AIR,	1	1
02	POWER ADAPTOR & POWER CORD	1	1
03	284*253*110 mm paper box	1	1
04	497*337*293 carton	1	4

J. Attachment 1

1. The input voltage and current difference MW-06 AIR and A vendor：

a. The Positive and negative voltage difference：MW-06 AIR → △1V ；A vendor → △1.2V。

b. The Positive and negative current difference：MW-06 AIR → △7.6mA ；A vendor → △44mA。

c. The angle difference：MW-06 AIR → No angle difference；A vendor → 76°。

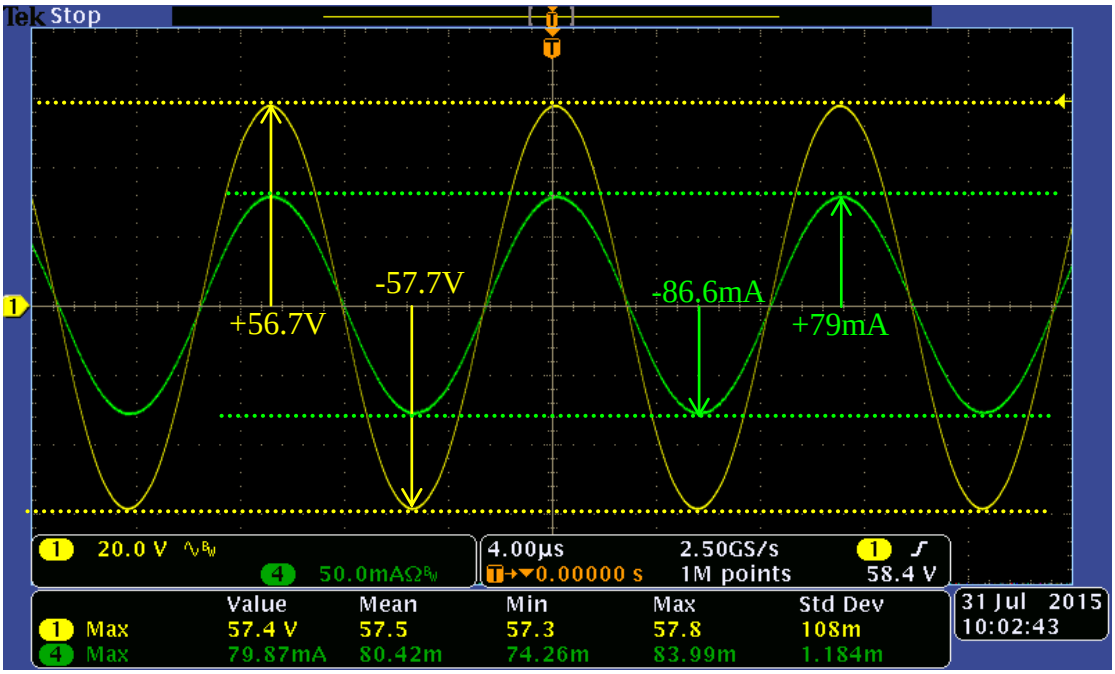


Fig1. MW-06 AIR input voltage and current waveform

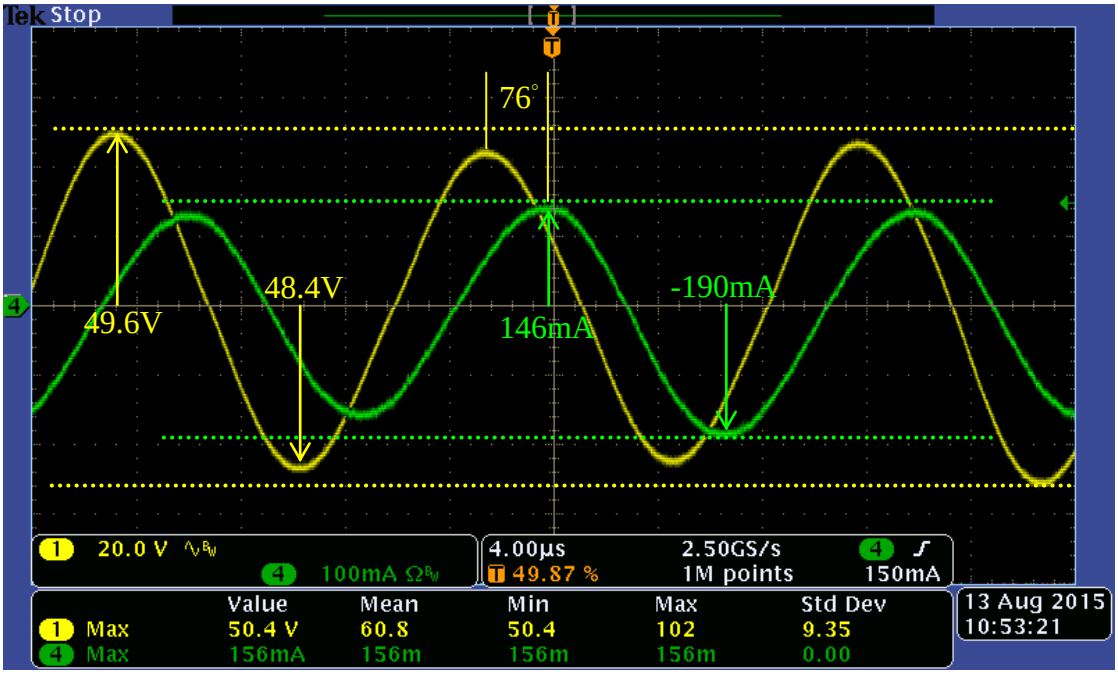


Fig2. A vendor input voltage and current waveform