AP&T®

EUROSTAT

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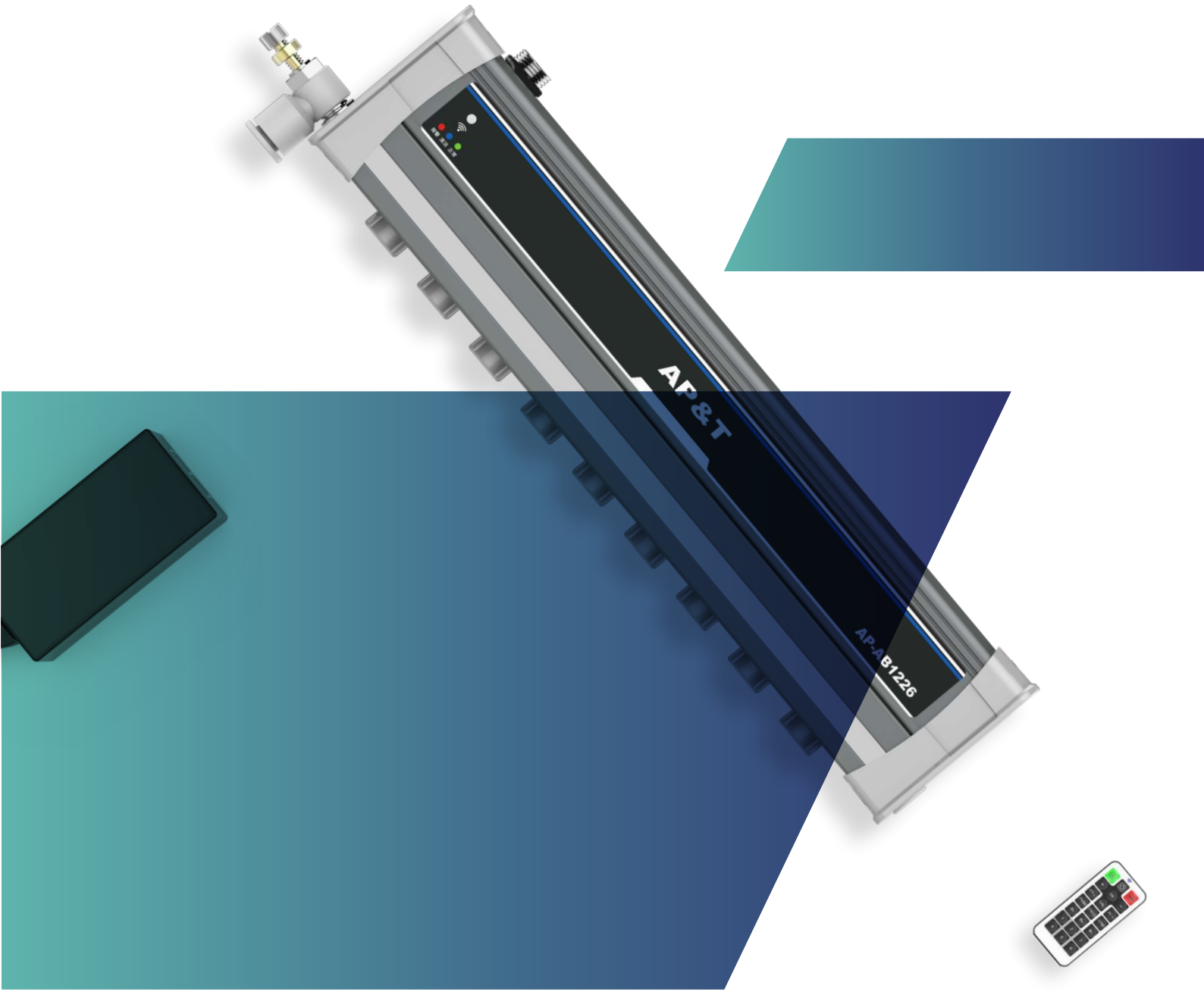
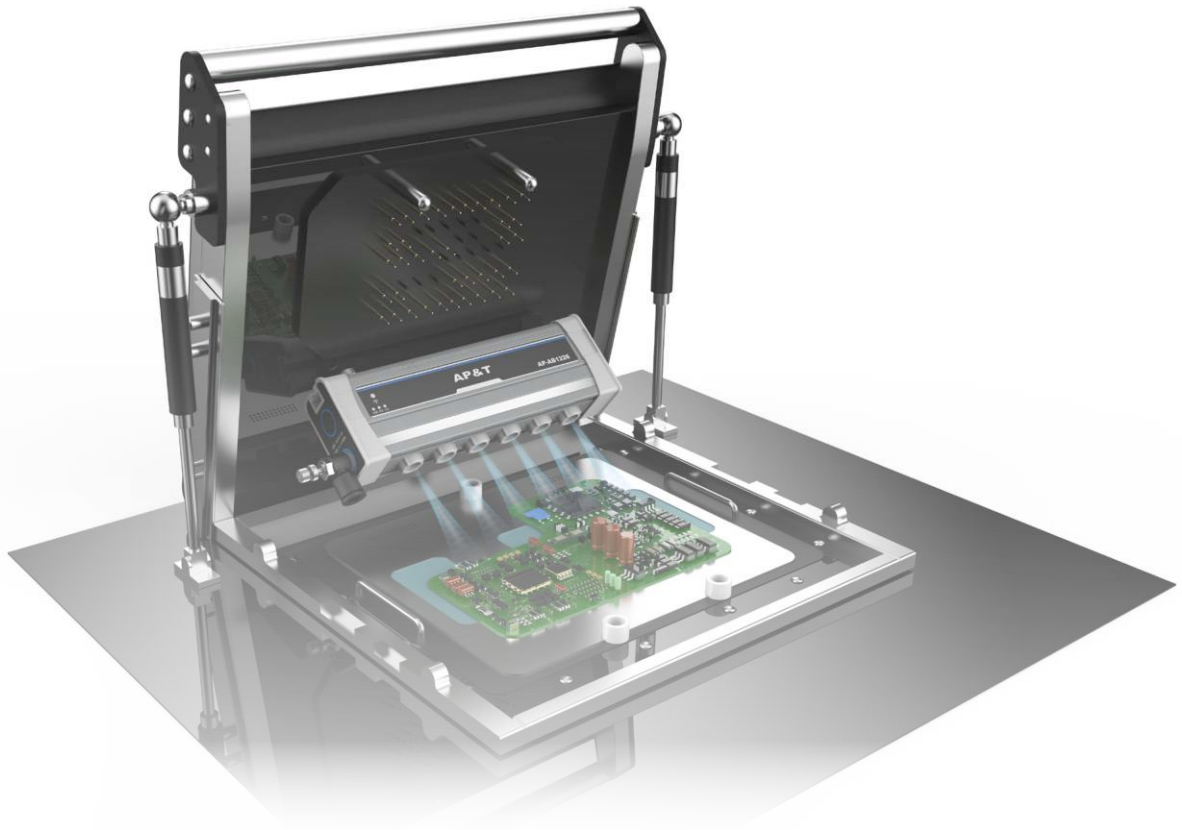


Intelligent Static Removal Ion Bar

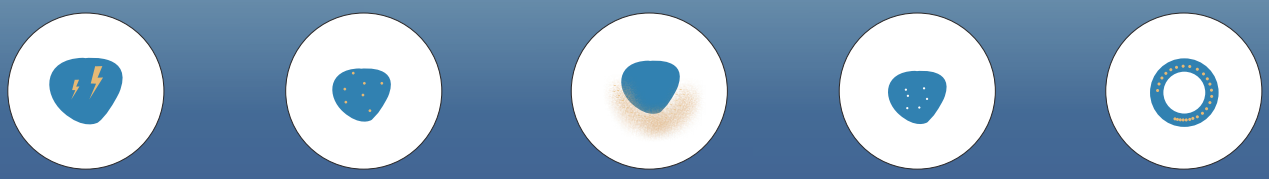
AP-AB1226

High speed Self-balancing



Suitable for LCD panel,semiconductor, optoelectronics, semiconductor electronics industries

Effectively solve the problems caused by static electricity



Static removal

Prevent adhesion of objects

Prevent material splash

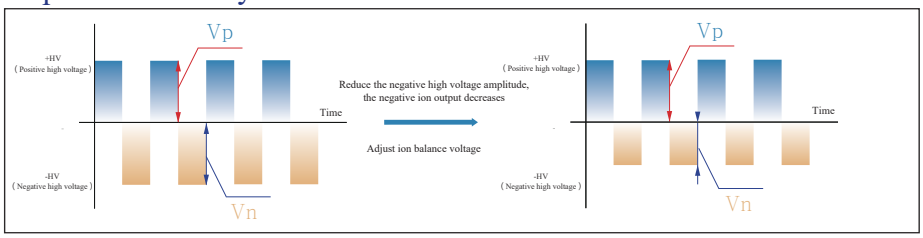
Prevent static electricity

Prevent blockage of feeder

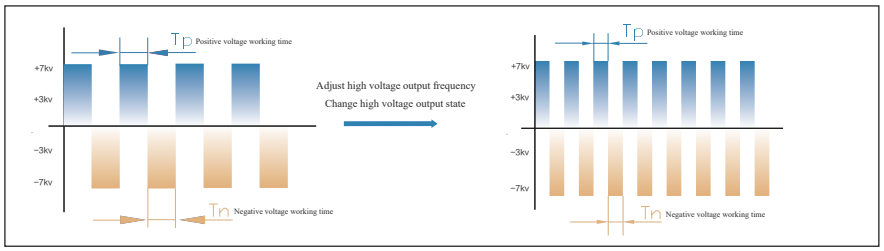
Intelligent Remote Control

Cleaning time /ion output frequency/
ion balance adjustable

The ion balance voltage can be adjusted by adjusting the negative high voltage amplitude remotely.



The output frequency of positive and negative ion is adjustable, which is suitable for different discharge distance to achieve faster discharge speed.



Button function instructions		
Function	Symbol	Operation instructions
Unlock		Unlock before adjusting operating parameters
Run / Pause		Device starts running when power is on. Press "STOP" to standby and no high voltage output. Press "RUN" again and the device will start working.
Adjust cleaning cycle	CT_{TH} → +/-	Press CT_{TH} first, then press +/- to increase or decrease the cleaning cycle. Minimum adjustment unit 1H.
Adjust balance	IB_N → +/-	Press IB_N first, then press + when the positive voltage on flat panel detector or discharge object surface is high, press IB_N first, then press - when the negative voltage on flat panel detector or discharge object surface is high until the ion balance reaches the ideal status.
Confirm	CAL → OK	Note: Press CAL first, then press OK to confirm after adjusting the output parameter; otherwise, false alarms are likely to occur.

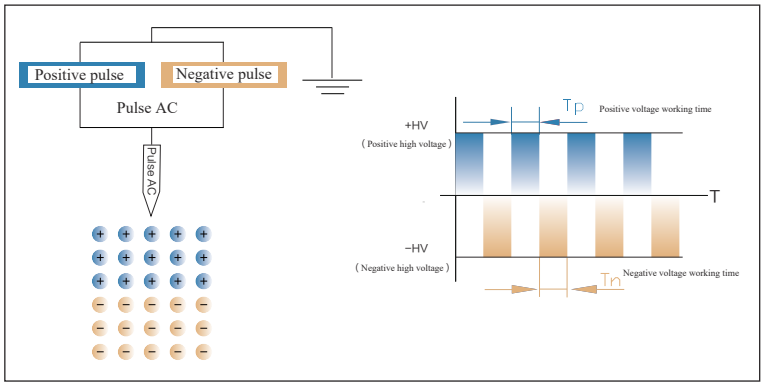
Pulse AC

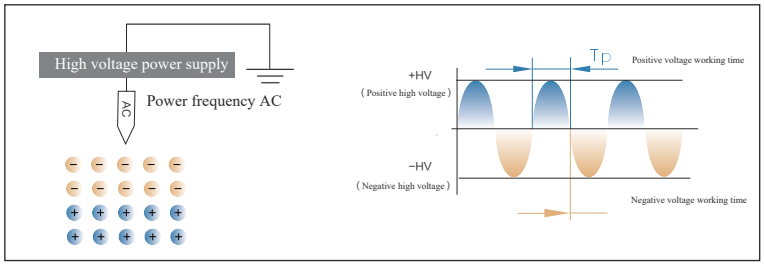
Discharge effect is better compare to power frequency AC ion bar

Pulse AC VS traditional AC

Pulse AC method generate ions with two polarity by applying "+" and "-" high voltage alternately on each electrode needles.

Compared with power frequency AC method, the utilization rate of ion generation is higher. And its static elimination ability can be exerted no matter in short or long distance. In addition, the discharge frequency can be adjusted, which can extend the discharge distance. The output ratio of positive and negative ions can be adjusted, which is convenient for intelligent control.





3 situations of static electricity on the surface of the object

Decrease Tp so that the positive voltage acting capacity becomes smaller and the acting time becomes shorter. Less positive ions and more negative ions output to neutralize the excess positive charge on the surface of the object.

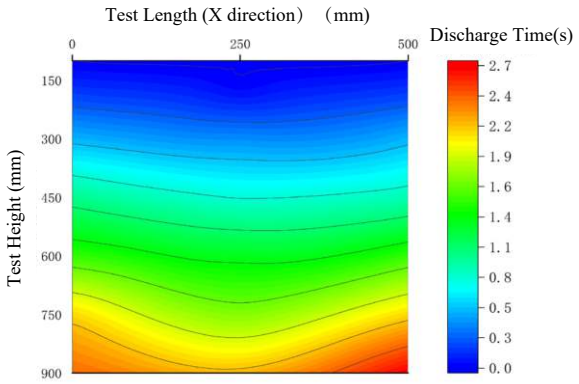
Increase Tp so that the positive voltage acting capacity becomes greater and the acting time becomes longer. More positive ions and less negative ions output to neutralize the excess negative charge on the surface of the object.

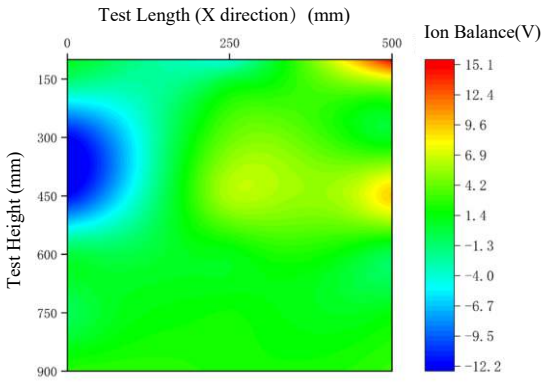
Adjust the duty ratio [Tp/(Tp+Tn)] to an appropriate ratio and send out the same amount of positive and negative ions to neutralize the static electricity on the surface of the object.

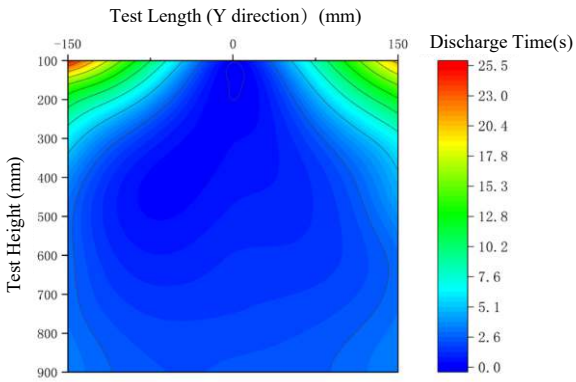
High Efficiency Static Removal

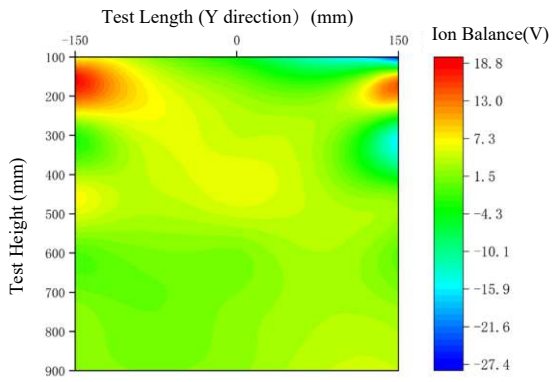
Keep a clean production environment and stay away from static electricity

Data diagram of discharge performance of ion bar： Air pressure：0.3MPa　Ion bar length：500mm









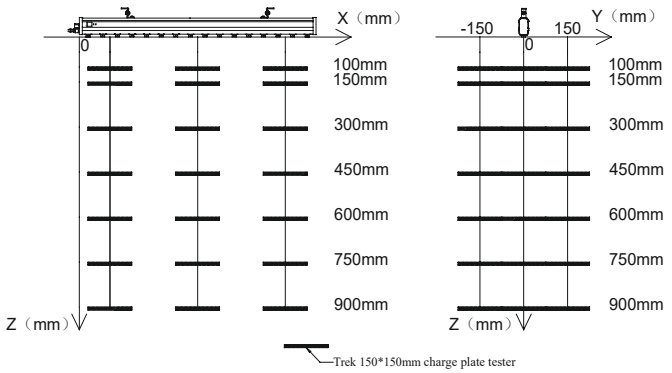
Test standard：ANSI/ESD.STM3.1，SJ/T 11446—2013 Test instrument: Trek charge plate tester

Test voltage：±1000V → ±100V attenuation

Test environment：humidity 50±5%；temperature 23±3℃

Air pressure：0.3MPa

Ion bar length：500mm



The left and right ends of the ion bar are aligned with the edge of the plate.

Features

Safe / Easy to use / Durable

No.1

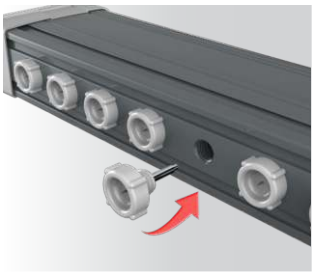
DC24V high flexible towline power cable

The standard length of the power cable is 1500mm and the low voltage wiring of 24V can eliminate the aging phenomenon of the cable caused by the discharge and the impact on the peripheral equipment,which can build a highly reliable system.

No.2

Discharge part easy to replace

Twist the needle holder clockwise to replace the needles when it is damaged.



No.3

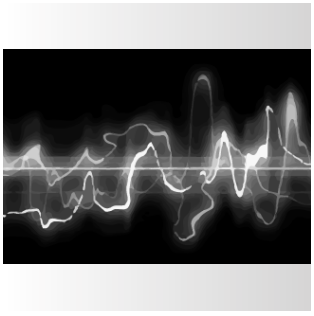
Abnormal alarm

Red light alarm when positive and negative high voltage is abnormal。

No.4

CE certification

It can effectively avoid external electromagnetic interference affecting the normal operation of the ion bar which is a high-security and high-reliability static eliminator.



No.5

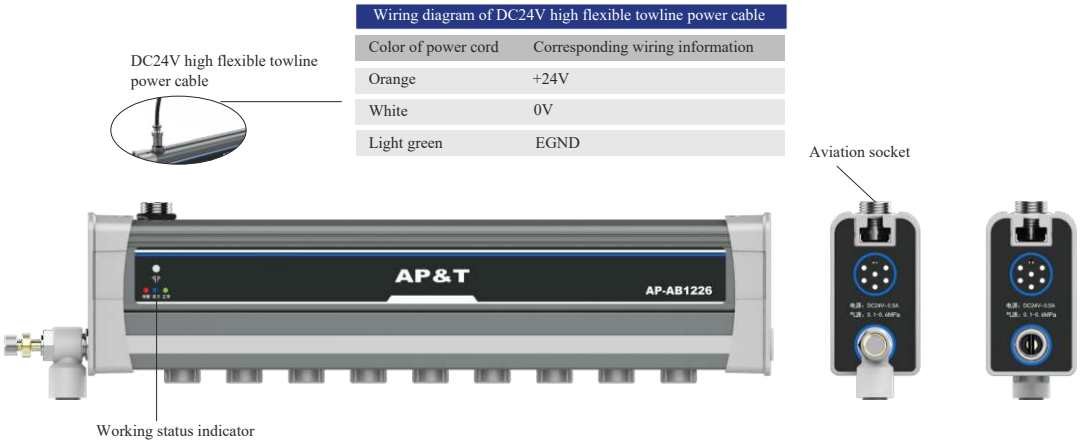
Intelligent remote control

Ion output characteristics can be adjusted by remote control.

Product Use

Product details / product size / product specification

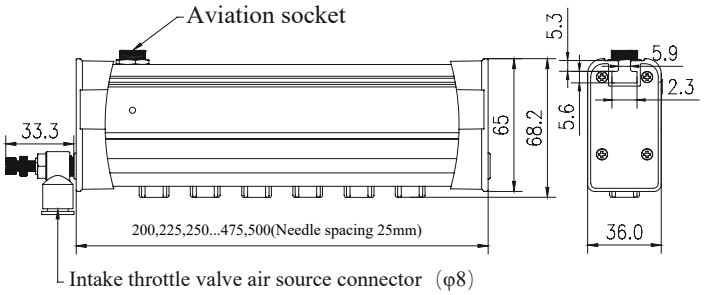
Product details



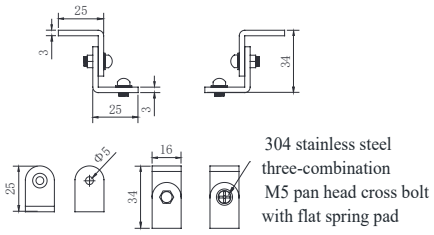
Wiring diagram of DC24V high flexible towline power cable	
Color of power cord	Corresponding wiring information
Orange	+24V
White	0V
Light green	EGND

Product size

Unit：mm



Ion bar dimensions



Mounting bracket dimensions

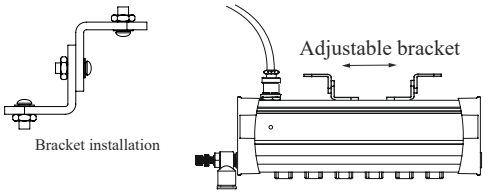
Product specification

Model	AP-AB1226
Input voltage	DC 24V
Power	＜ 5W（Default factory Settings）
Output voltage	4000V → 7000V
Ion emission	Pulse AC
Emitter electrode	Tungsten alloy
Output frequency	55Hz
Duty ratio	5%—95%
Discharge range	L*W*H：Bar length *200*100mm
Installation distance	100 → 1000mm
Ion balance	≤|±30V|（AVG）
Discharge time	≤ 1S（Test distance 300mm）
Status indicator	Green light - normal，Blue light - standby，Blue light flashing—debugging / cleaning，Red light - Abnormal high voltage
Working temperature	0℃ -50℃
Working humidity	＜ 70%
Air pressure	0.1-0.6MPa
Intake throttle valve connector	G1/8 for φ8 pipe diameter
Dimensions	L*W*H：{200，225，250... → 500mm(Needle spacing 25mm)}*36*68.2mm
Bar material	Flame retardant PVC、ABS、SUS
Packaging accessories	M5-12*12*4 square nut；DC24V high flexible towline power cable 1500mm
Warranty	1Year
Certification	CE

Products Use

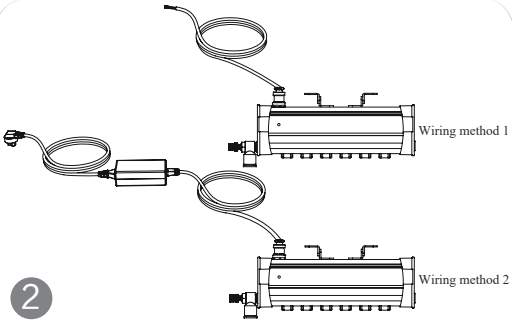
Step of use/Installation position/Packing accessories

Step of use



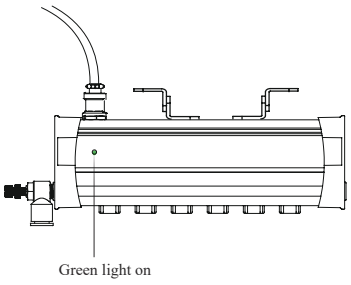
1

Take out ion bar, power adapter, power cable, stainless steel mounting bracket and other accessories from the packing box and install the stainless steel mounting bracket on the mounting slot of the ion bar base.



2

Wiring method 1：Connect one end of the DC24V high flexible towline power cable to the industrial control power supply, and insert one end of the aviation plug into the aviation socket on the bar body.
Wiring method 2：Connect the RJ45 network port of the power connection network cable to the DC24V adapter power supply, and insert one end of the aviation socket into the aviation socket on the bar body.



3

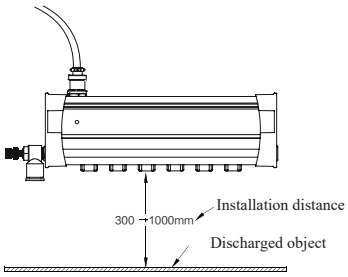
The panel indicator light green shows ion bar working normally.

4

Adjust the appropriate voltage output parameters, output positive and negative air ions to neutralize the static electricity on the surface of the object.

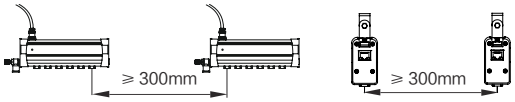
Installation position

1) Place the ion bar in the working area where static electricity is to be eliminated and the installation angle is perpendicular to the surface of the charged body. The installation distance between the ion bar and the surface of the charged object should be 300mm to 1000mm.

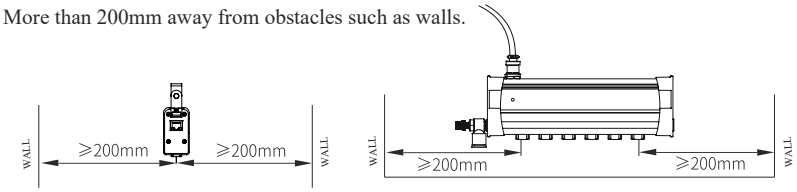


2) Ion bar strip grounding electrode is not allowed to be covered by other objects.

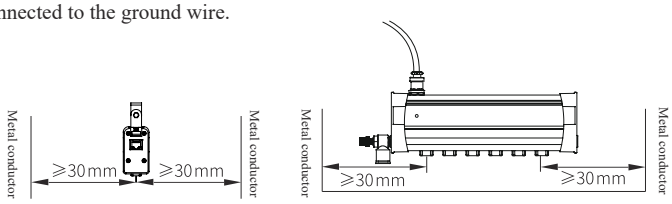
3) Two ion bars should be installed side by side with an interval of more than 300mm.



4) More than 200mm away from obstacles such as walls.



5) Ion bar should be at least 30mm away from the metal conductor and metal grounding body around the electrode and the bar body must be reliably connected to the ground wire.



Packing accessories

Part name	Picture	Part No.	Specification	Qty
Power adapter(optional)		OSPD00601	GRT-240200：DC24V 2A， Dual network port output， Size：123*61*40.5mm（L*W*H）	1
National standard power cable(optional)		8YXG25110	Standard 1.8m，Optional 3m/5m	1
Three-core flexible power cable with aviation plug		AP4855000	Standard 1.5m（Customizable on site）	1
RJ45 to aviation plug power cable (optional)		AP4855001	RJ45- aviation	1
L-shaped stainless steel mounting bracket		AP8038005	Height 25mm /Width 16mm/ Thickness 3mm/Aperture 5mm（measured 4.8mm）	4
Square nut		AP8933000	M5*12*12*4	2
304 stainless steel spring washer		AP8943000	M5	6
304 stainless steel flat gasket		AP8946004	M5	6
304 stainless steel pan head Phillips screw		AP8900001	M5*12	6
Hex nuts		1LML05000	M5	4
Needle holder		AP6620003	——	——
Remote control		AP2253011	Infrared remote control （L*W*H：85.76*39.76*6.66）	1
Intake throttle valve		3JTQF0801	Standard 8mm，Optional 6mm	1

⚠ Safety warning

1. Read the operating instruction carefully before installing and using the device.
2. The whole equipment must be reliably grounded with a grounding resistance of less than 1 ohms during use; Otherwise, it is easy to cause abnormal or even damage of ion bar.
3. Do not use the device when the humidity is higher than 70%.
4. Do not use the device in inflammable and explosive environment.
5. It is strictly forbidden to disassemble products without authorization. Internal maintenance and repair must be carried out by professional personnel.
6. The product is strictly prohibited to touch liquid during use, otherwise there will be abnormal, resulting in electric shock or fire.
7. Power must be turned off during inspecting or replacing the product, otherwise it may cause electric shock or fire.
8. The product is specially designed for removing static electricity and is strictly prohibited for other purposes. Any abnormal use may cause machine failure, electric shock, fire and other hidden dangers.
9. It is strictly forbidden to touch the electrode needles when power is on, otherwise it is easy to cause fault and electric shock accident.
10. Discharge needle is a sharp metal object, please use it with care.
11. Please check the specifications of the power supply before powering on the product. Any power supply that does not meet the specifications may cause damage or even failure to the product.
12. Check the power cable regularly. If it is damaged, replace it immediately; otherwise, leakage and abnormal operation may occur.

⚠ Trouble shooting

NO.	Problems	Reasons	Solutions
1	The indicator on the panel is off	Poor contact of the power cable	Check whether the power cable is in good condition and securely connected
		Power supply mismatch	Confirm the power supply specification（INPUT：100—240VAC 50/60Hz；OUTPUT：24VDC 2000mA）
2	The electrostatic removal performance decreased obviously	Discharge needle is polluted and damaged	Clean or replace the discharge needle
		The discharge needle seat is not tightened	Confirm the discharge needle seat is tightened
		Bearing set of ion bar is improper	Confirm the best bearing set
3	The electrostatic removal performance decreased	There are conductors or other ion bar around	Remove (moving) conductors or other ion bar
4	Panel indicator red light on	Electromagnetic interference	Turn off the power switch / unplug the power cable, restart the ion bar
		Abnormal discharge	Confirm the installation location and stay away from surrounding conductors
		No power supply for high voltage module	Return to factory for maintenance
		High voltage module is damaged	Return to factory for maintenance
5	Panel indicator blue light flashes	Poor grounding of the strip grounding electrodes on both sides of the electrode needle at the bottom of the ion bar	Return to factory for maintenance
6	Unable to discharge	High voltage module is damaged	Return to factory for maintenance
		Main-board chip is damaged	Return to factory for maintenance
		K_gl+`mjpbafgngqb_k_ecbasqcb`wnoor grounding or no grounding	Check the grounding of the ion bar and plant equipment, and return to the factory for maintenance
7	The product is smoky or burnt	High voltage module is damaged or insulation of the discharge seat is damaged	Return to factory for maintenance

⚠ Maintenance

1. The ion bar should be cleaned and maintained in time according to the use environment and the required electrostatic protection requirements in order to ensure the good performance of the product. That is, gently remove the carbon deposits on the discharge electrode, discharge socket, and metal discharge body with electrostatic brush, dust-free cotton swab, dust-free cloth dipped in anhydrous alcohol, which will improve its performance significantly. Note:
   A. Operation must be done 10 minutes after power cut off.
   B. It must be cleaned when dust or white stuff appear on the tip of the needle during use. Use dust-free cloth dipped in anhydrous alcohol to clean when brush can not meet the cleaning requirements.
   C. The ion bar must be powered on after alcohol is completely volatilized after cleaning. No other organic solvent can be used to clean the ion bar.
2. If the switch working indicator light of the power plug-in port on the panel of the ion bar is off , it should be stopped and repaired by professional maintenance personnel. It can be used only after the electrical performance index is normal.

⚠ After-sales service

AP-AB1226 ion bar has undergone rigorous testing and aging treatment before ex-work. Its performance has completely reached the relevant indicators marked in the usage instruction.

1. AP&T makes a commitment to the customer that any defective parts inspected by AP&T will be repaired or replaced free of charge within one year from the date of purchase. However, this commitment does not apply to:
   (1) The device is incorrectly used or installed.
   (2) Damage caused by negligence or accident during use.
   (3) Modified, disassembled or repaired by other service departments not authorized by Anping Company.
2. The alloy electrode is a consumable product which is not included in the scope of warranty and will be charged for replacement when repairing.
3. AP&T shall not be liable for any incorrect use of the products except for repair or replacement of parts as specified above.