

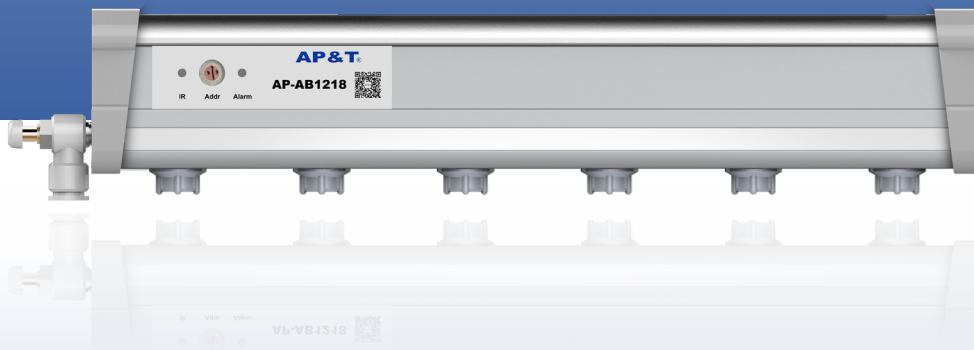
AP&T[®]

Shanghai Anping Static Technology Co.,Ltd

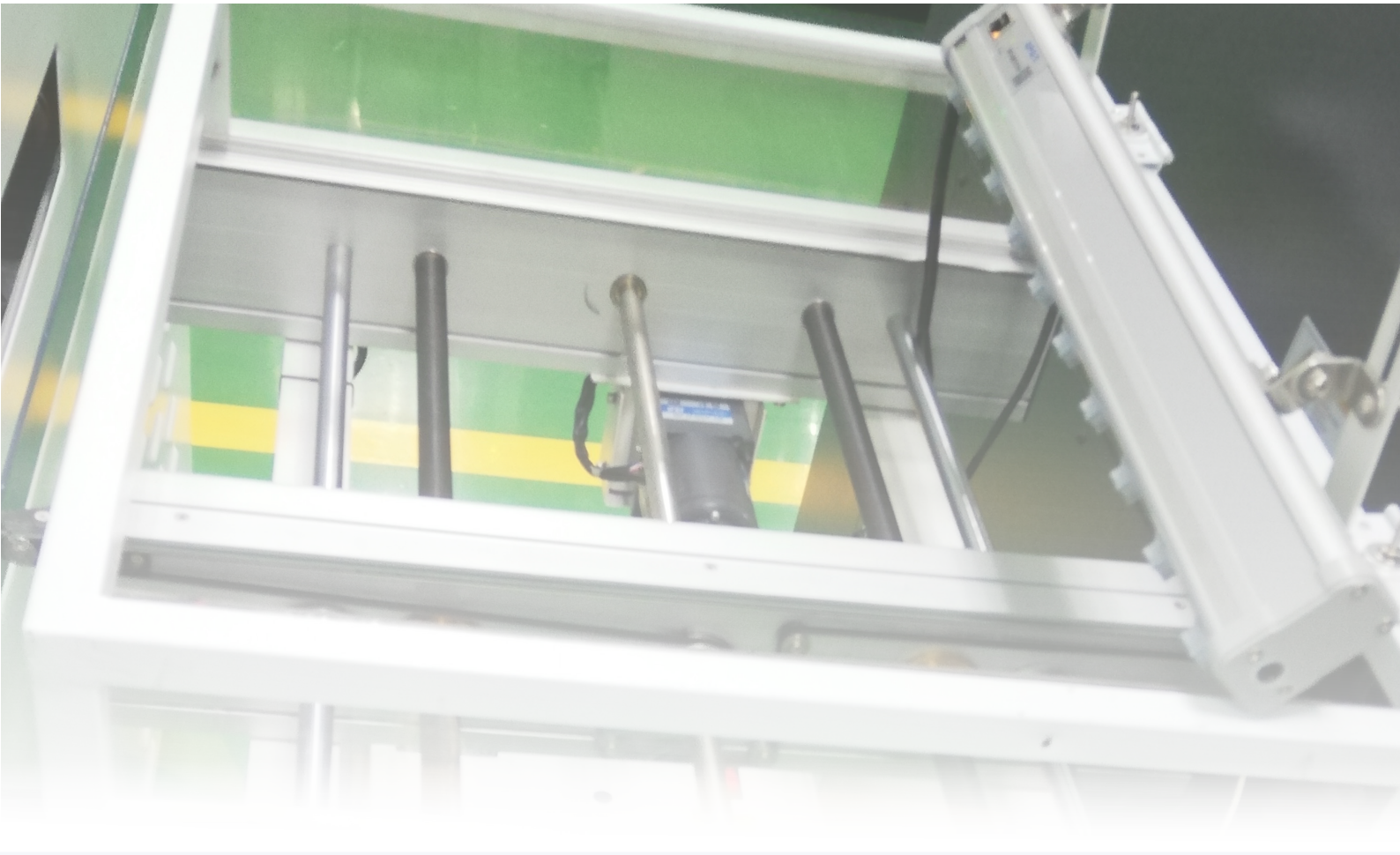
High Efficient Electroshock-proof

Intelligent Ion Bar

AP-AB1218



—AP&T—

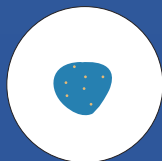


Widely used in electronics, optoelectronics, semiconductor and other industries

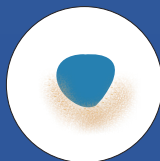
Effectively solve the problem caused by static electricity



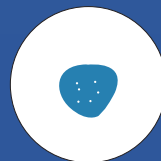
Static removal



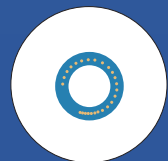
Prevent adhesion of objects



Prevent sticking



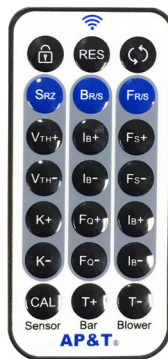
Control ink splashing



Prevent uneven scattering

Intelligent Control

Ion balance/
Ion output frequency adjustable



Remote control button

Unlock

1. After unlocking, continue to delay 30S after pressing any button
2. After unlocking, 30s to exit and lock if no button presses

User manual:

BR/S: Run and pause

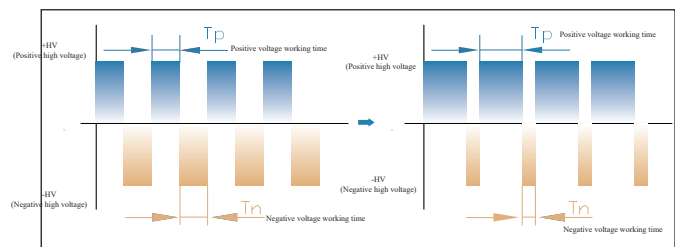
IB+ / IB-: Balance adjustment (5%-95%, unit is 0.1%)

FQ+ / FQ-: frequency adjustment (unit is 1HZ)

T+ / T-: cleaning time adjustment, the unit is 1D=24H

Ion balance adjustment

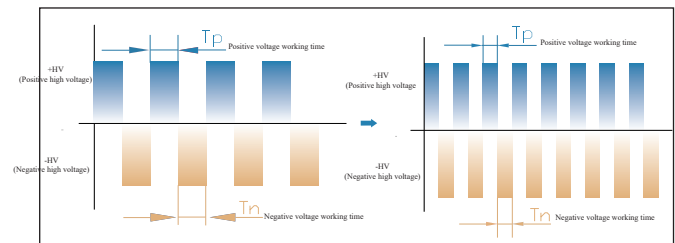
Press "IB-" when positive voltage on plate tester or target object is large or "IB+" when negative voltage on plate tester or target object is large until the ion balance reaches to ideal status. Static removing speed can be raised by adjusting the output ratio of positive and negative ion.



Output frequency of positive & negative ions adjustment

Adjust the output frequency of positive and negative ions to apply to different elimination distances.

No matter the distance is long or short, it can exert its static elimination ability. The factory setting is 30Hz. A handheld terminal is required or return the ion bar to manufacturer if output frequency need to be adjusted.



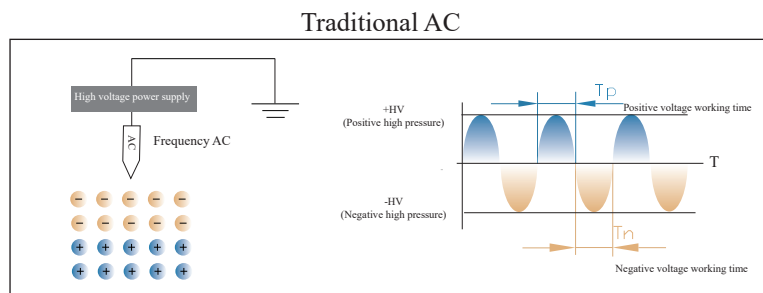
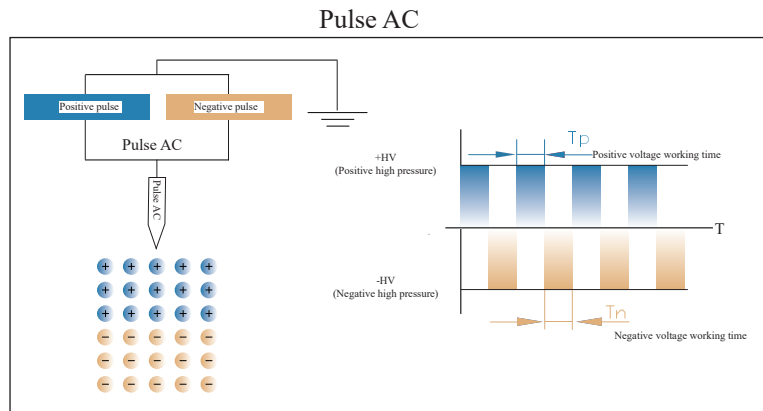
Pulse AC

The effect of static eliminating is better compare to power frequency AC ion bar

Comparison with traditional AC

The pulsed AC method alternately applies "+" and "-" high voltage to one electrode needle to generate two polar ions.

Compared with the traditional AC method, the amount of generated ions is increased and no uneven static elimination is found. Static elimination ability fits for both short or long distance.



3 situations of static on the surface of the object



Decrease T_p so that the positive voltage 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.



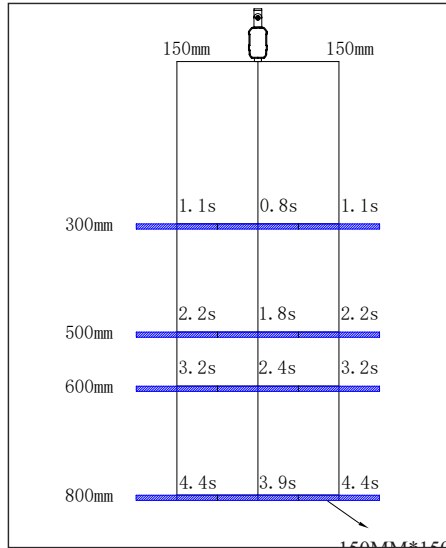
Increase T_p so that the positive voltage acting capacity becomes greater and the acting time becomes longer. More positive ions and less negative ions output to neutralize and excess negative charge on the surface of the object.



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

Efficiently static removal

Stay away from static electricity & for clean production environment



Test Conditions:

ion bar length: 360mm,
air flow pressure: 0.2Mpa,
working frequency: 30Hz

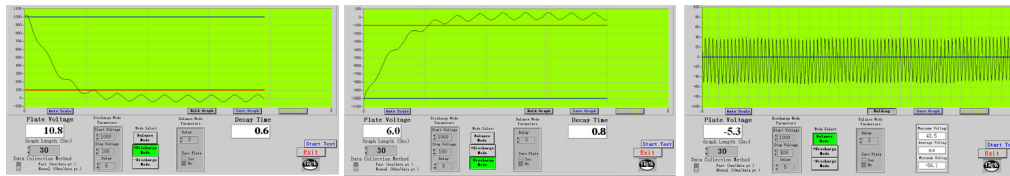
Test standard: ANSI/ESD.STM3.1, SJ/T 11446—2013

Test instrument: Trek157 static tester

Test voltage: $\pm 1000V \rightarrow \pm 100V$ attenuation

Test environment: humidity $50\pm 5\%$; temperature $23\pm 3^\circ C$

The test data diagram is as follows (test distance: 300mm, ion bar length: 360mm, air flow pressure: 0.2Mpa, working frequency: 30Hz):



Test data under other conditions are as follows

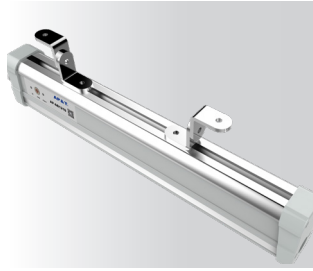
Test diagram

Ion bar length: 360mm; working frequency: 30Hz;							
Test distance (mm)		Air flow pressure (MPa)Remarks: 1*	Duty factor (%)	Discharge speed			
Vertical	Level			Positive discharge time (S)	Negative discharge time (S)	Ion Balance voltage (V)	
300	-150	0.2	50	0.9	1.1	11.0	
			0	0.6	0.8	8.0	
			150	0.7	1.0	-4	
	-150	0.4	51	0.6	0.6	4.0	
			0	0.5	0.6	14	
			150	0.5	0.6	5	
	-150	0.6	51	0.6	0.6	17	
			0	0.4	0.4	-2	
			150	0.4	0.4	6	
	500	-150	0.2	50	1.7	2.2	10.0
				0	1.4	1.8	8.0
				150	1.5	2.1	-6
-150		0.4	51	1.4	1.4	13.0	
			0	1.0	1.3	12	
			150	1.1	1.4	-6	
-150		0.6	51	1.1	1.3	-17	
			0	1.0	1.2	15	
			150	1.0	1.2	9	
600		-150	0.2	50	2.3	3.2	6.0
				0	2.0	2.4	7.0
				150	2.0	3.2	3
	-150	0.4	51	1.6	2.1	13.0	
			0	1.4	1.9	-10	
			150	1.5	2.0	7	
	-150	0.6	51	1.4	2.0	-13	
			0	1.3	1.6	-4	
			150	1.3	1.7	-4	
	800	-150	0.2	50	3.9	4.4	7.0
				0	2.8	3.9	3.0
				150	3.4	4.3	4
-150		0.4	51	2.7	3.4	7.0	
			0	1.9	2.8	15	
			150	2.2	3.0	6	
-150		0.6	51	2.0	2.6	-13	
			0	1.6	2.4	4	
			150	1.7	2.5	8	

Remarks: 1* — Real-time pressure value during gas flow.
The balance voltage performance of the ion bar varies with the length of the bar, airflow pressure, working frequency, and installation distance; the duty cycle should be adjusted according to the specific use environmental conditions to make the balance performance of the ion bar reach the best state.

Features

Safe / Easy to use / Durable



No.1

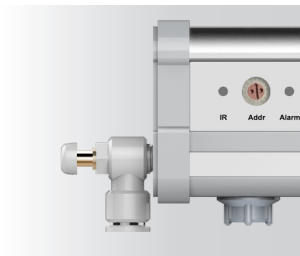
Easy installation

Provide stainless steel mounting angle and can adapt to various installation environments.

No.2

Intake throttle valve

The specification is $\Phi 8$ -G1/8 Grey.



No.3

Working status visualization

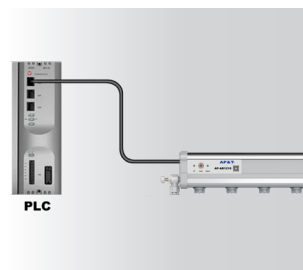
Green light----working normally
Red light-----abnormal high voltage



No.4

Extenal PLC

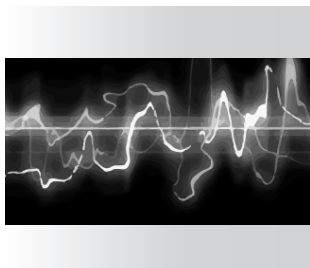
External PLC can carry out high-voltage alarm, power-on indication and cleaning indication monitoring output.



No.4

CE certification

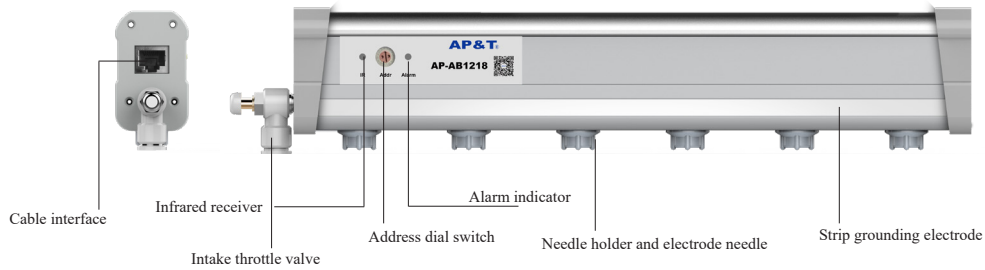
It can effectively prevent the external electromagnetic interference from affecting the normal operation of the ion bar. This is a static electricity eliminator with high safety and high reliability.



Specification

Details / Size / Parameter

Product Details



DIP switch:
 0: Pause/modify address
 1: 0.1HZ
 2: 0.5HZ
 3: 1HZ
 4: 5HZ
 5: 10HZ
 6:30HZ
 7: 50HZ
 8: 100HZ
 9: 100HZ
 A: 100HZ
 B: 100HZ
 C: 50HZ (addition and subtraction per 1 frequency)
 D: 100HZ (addition and subtraction per 1 frequency)
 E: Positive (P: 95%, N: 5%-100HZ)

Indicator function:
 Blue light: infrared, pause, cleaning instructions
 Green light: running
 Red light: alarm indication

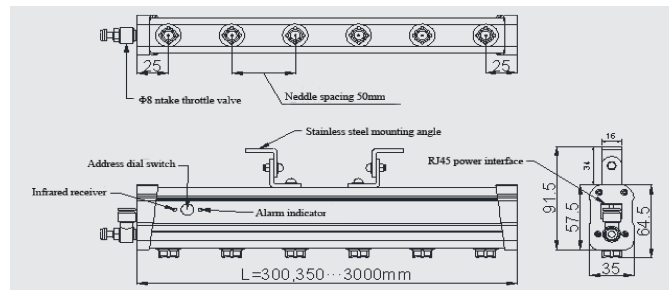
NPN function:
 7: High pressure indication
 8: Power-on instructions, cleaning instructions

Unlock
 1、 After unlocking, continue to delay 30S after pressing any button
 2、 After unlocking, 30s to exit and lock if no button presses

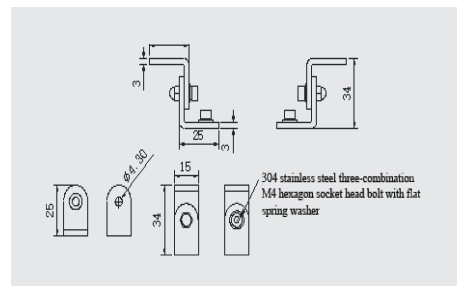


Product Size

Unit: mm



Ion bar size drawing



Mounting bracket size drawing

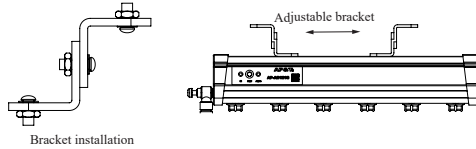
Product Parameter

Model	AP-AB1218
Input voltage	DC 24V
Input Current	< 600mA
Power	10W
Working voltage	DC±5KV
Ion emission	Pulse AC
Emitter electrode	Tungsten
Discharge structure	Resistance coupling
Output frequency	1,3,5,10,20,30,50Hz; (Ex-Work setting: 30Hz)
Duty factor	10%—90%
Discharge range	L*W*H: (300-3000mm)*300*1000mm
Installation distance	100→1000mm
Ion balance	≤ ±30V (AVG)
Discharge speed	≤2S
Status indicator	High pressure alarm indicator (green light-----normal operation ; red light-----abnormal high voltage)
Communication function	RS485
Signal output	Open collector 50V/100mA
Air pressure	≤0.6MPa
Compressed air connector	Φ8-G1/8 Grey
Working temperature	0°C-50°C
Working humidity	< 70%
Dimensions	L*W*H: (300-3000mm)*35*64.5mm
Bar material	Flame retardant PVC、AL、SUS
Packaging accessories	180°rotating installation angle, M5-12*12*4 square nut
Warranty	1 year
Certification	CE

Use of product

Installation step / Installation position / Packaging accessories

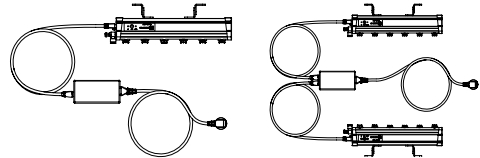
Installation step



Bracket installation

1

1. Take out the ion bar, adapter power supply, power supply network cable, stainless steel mounting brackets and other accessories from the packing box.
2. Install the stainless steel mounting brackets on the base mounting slot on the ion bar.

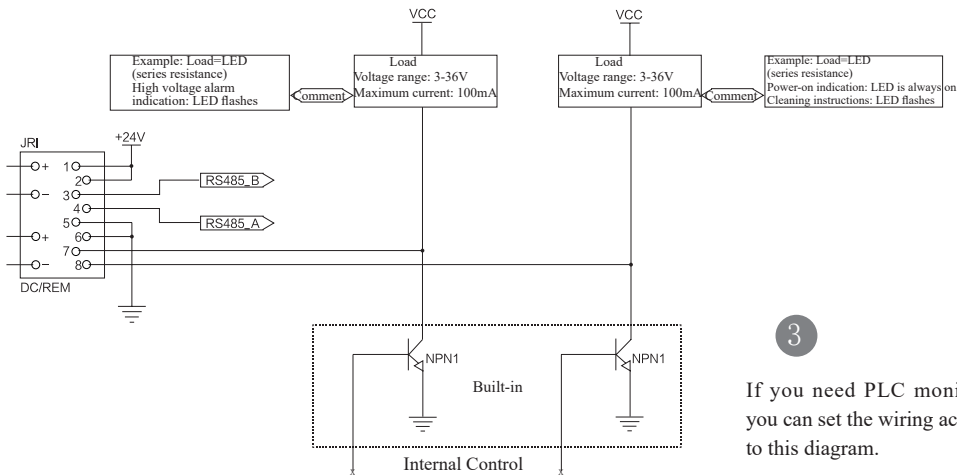


one adapter for one bar

one adapter for two bars

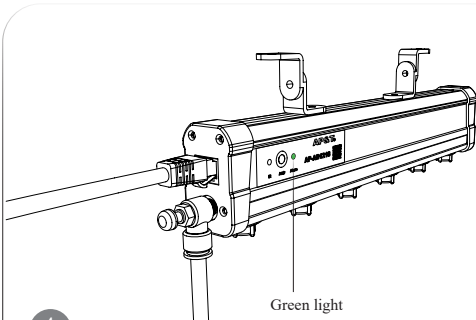
2

- Insert one end of the power cord into the RJ45 socket of the power adapter and the other end into the power RJ45 socket on the bar body. One adapter can connect up to two ion bars.



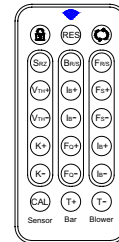
3

- If you need PLC monitoring, you can set the wiring according to this diagram.



4

- Connect the air source connector on the bar body to the air source generating device, turn on the air source switch and control the maximum operating pressure of the compressed air flow to avoid malfunction of the ion bar.

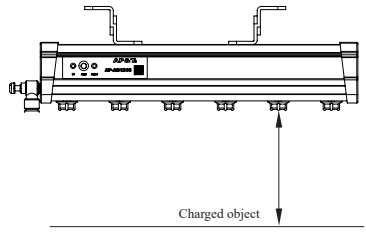


5

- Use the remote control to adjust the voltage output parameters under the appropriate air pressure. When the positive voltage on the surface of the flat panel detector or the de-energized object is large, press to adjust "IB-"; when the negative voltage on the flat panel detector or the surface of the de-energized object is large, press to adjust "IB+" until the balance is adjusted to the ideal status.

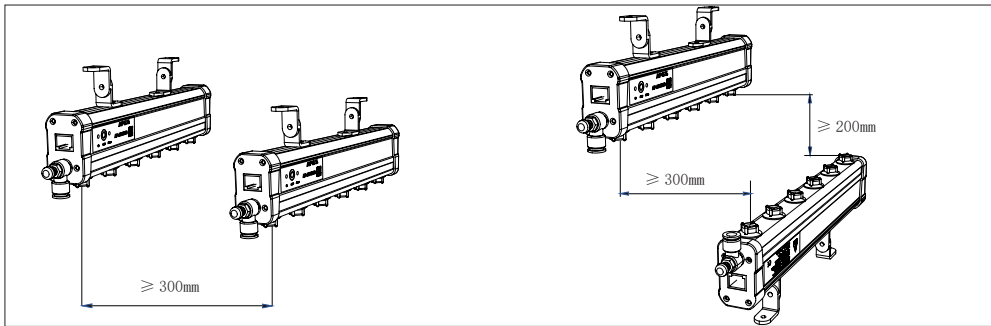
Installation position

- Choose the best power elimination position and install the rod body and the matching power adapter firmly after the static detection of the on-site working environment. The installation angle should be perpendicular to the surface of the charged body, and the installation distance can be referred to the following table. (Ex-work setting is 30Hz. Use the remote control to adjust if you need to adjust the output frequency. Configure a flat panel tester if you want to see the adjustment results)

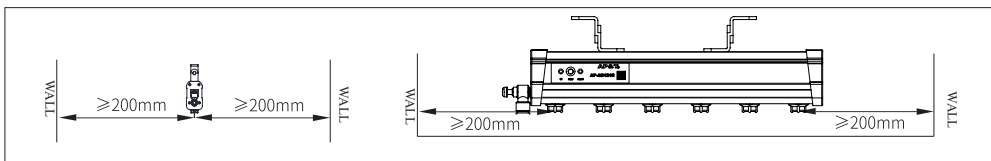


Working frequency (Hz)	Installation distance (mm)	Application
50	100-300	Low balance requirements such as semiconductor devices;
30	300-450	Low balance requirements such as optoelectronic devices;
20	450-600	Low balance requirements such as electronic devices;
10	600-750	Material filling and transfer
5、3、1	750-1000	Discharge at a long distance

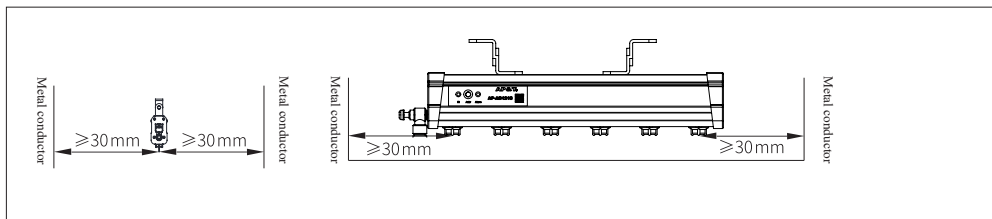
- The ion bar grounding electrode is not allowed to be covered other objects.
- It is advisable to install two ion bars side by side with an interval of more than 300mm. Two ion bars should be staggered by more than 300mm If they are to be installed face to face.









- It is advisable to be more than 200mm away from obstacles such as walls.



- For the safe use of the ion bar, the ion bar discharge electrode should be at least 30mm away from the metal conductor and metal grounding body and the bar body must be reliably connected to the grounding wire.



Packaging accessories

Name	Image	Part No.	Specification	Quantity
Power Adapter		OSP000601	GRT-240200: DC24V 2A, dual network port output, Size: 123*61*40.5mm (L*W*H)	1
National standard power cord		8YXG25110	Standard:1.8m, optional:3m/5m	1
Crystal head black shield at both ends cable		8WXI00004	Standard:2.5m, 5m/10m:optional	1
Single-ended crystal head black shield cable		8WXI00002	FUTP CAT.5E 26AWG 4Pair Jacket PVC OD:5.6±0.2mm	Optional
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
Intake throttle valve		3JTQF0801	Standard:8mm, optional:6mm	1
Needle holder		AP6604000	—	—
Remote control		ZX2253000	Infrared remote control, neutral panel (L*W*H: 85.76*39.76*6.66)	1

AP&T®

Speciality Creates Value

Shanghai Anping Static Technology Co.,Ltd

Tel : 021-64517676

Fax : 021-64517673

Postcode : 200233

Website : www.ap-static.com

Address : 3/F,Building 27,No.69,Guiqing Road,Shanghai,China

