



It is recommended that only persons who have sufficient knowledge and experience such as system designers and responsible persons deal with this product after carefully reading the product manual.

1 The matters of safety

WARNING

- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not let the water touch the product. It may cause electric shock or fire due to malfunction.
- When you check or maintain the product, make it sure you turn off the power. It may cause electric shock or fire due to malfunction.
- Secure the product firmly when you want to secure it. There is a possibility of accident due to fall-over or malfunction, etc.
- Secure working space when you install the product. If working space is not secured, the checking or maintenance of the product is made impossible leading to failure of the product.
- Do not use the product at the place where dangerous material such as inflammable or ignitable material exists. This product is not the product of anti-explosive type.
- This device is made only for industrial uses. You need to ground the device beforehand. Otherwise, there are in case of malfunction, electric shock, or fire damage.

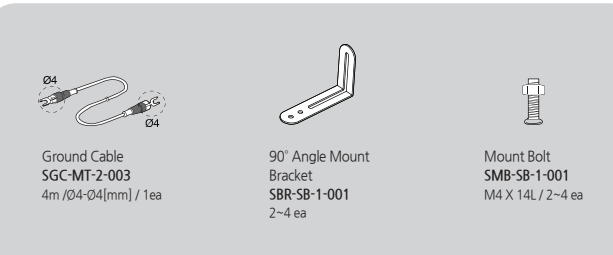
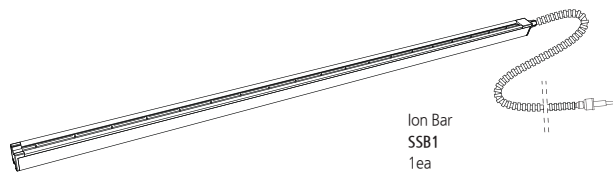
CAUTION

- Do not contact the discharge needle or terminal with power applied. There is a possibility of electric shock or malfunction.
- Handle the discharge needle with care as its tip is very sharp.
- Connect wires referring to the product manual. Wrong connection can cause failures.
- Take precautions as cables of the adaptor, the power line and communication line of each product may disconnect. If the cable is damaged, replace it immediately.
- Do not install the device where the vibration can be detected. Any minor impact or vibration on the device, the malfunction or danger of accident might happen.
- Do not use the product for the purpose outside of the range of the product use. If the product is used for the purpose outside of the range of the use, it can result in the trouble or the shortened service life. Or an unexpected problem may occur.
- The ionizer generates ozone(below 0.05ppm). If you sense the smell of ozone, ventilate the air.
- When installing or transporting the ion bar, be prepare not to bend the item during the process.

2 Check the package contents

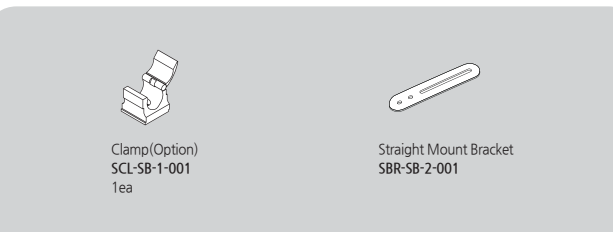
Product compositions

The package includes the following products composition.

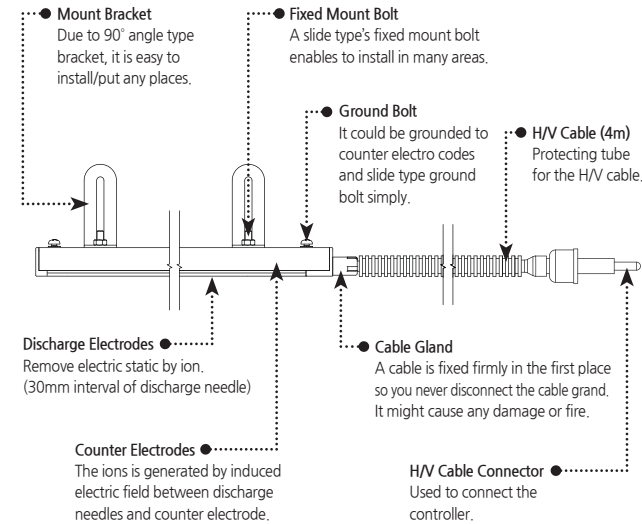


Option

If you require extra functions with the basic accessories we provided, you need to purchase optional items in below for further assistant.



3 Nomenclatures of parts



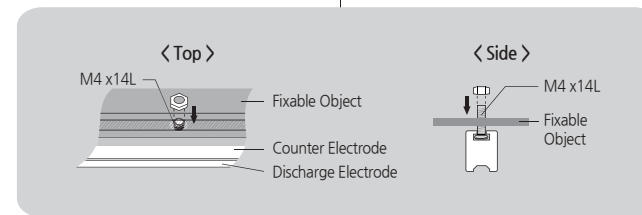
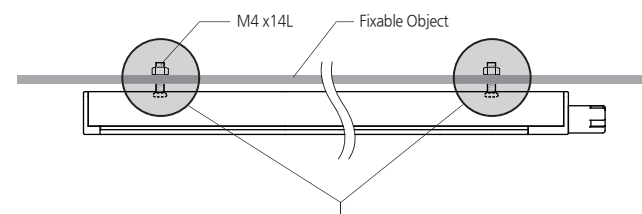
4 Installation and connection

Ion bar installation

When you install SSB1 Series, please check the distance between ion bar and object.  
 ※ Please, handle with care when you carry or install not to break or bend an ion bar.

Basic Installation - Installation by Using Mount Bolt(s) Only

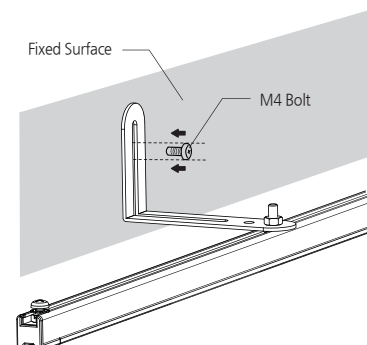
Use the M4 mount bolt(slide type) to the fixed object tightly. There might be some problem if you cause productions' conduction, vibration, or fall. Please install the product(s) tightly.



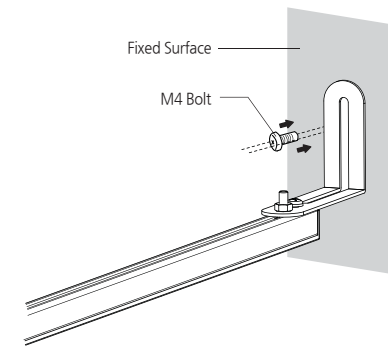
Basic Installation - Installation by Using 90° Angle Type Mount Bracket(s) (Standard)

- (1) Find the place where you want to install the unit.
- (2) Install the mount bracket(s) tightly by using M4 mount bolt(s).
- (3) Place the bracket where you want to install.
- (4) Screw M4 bolt(s) on the hole of 90° angle type mount bracket(s) and tighten it; otherwise, there might be some problem if you cause productions' conduction, vibration, or fall. Please install the product(s) tightly.

< Figure - 1 >



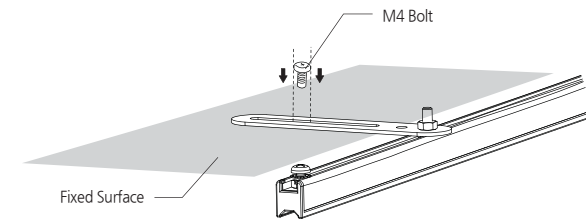
< Figure - 2 >



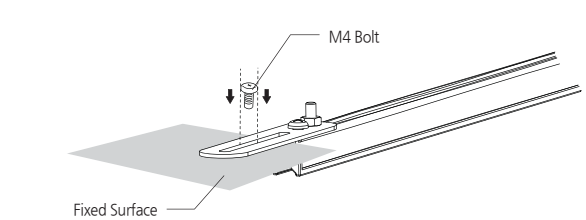
Basic Installation - Installation by Using Straight Type Mount Bracket (Optional)

- (1) Find the place where you want to install the unit.
- (2) Install the mount bracket(s) tightly by using M4 mount bolt(s).
- (3) Place the bracket where you want to install.
- (4) Screw M4 bolt(s) on the hole of straight type mount bracket(s) and tighten it; otherwise, there might be some problem if you cause productions' conduction, vibration, or fall. Please install the product(s) tightly.

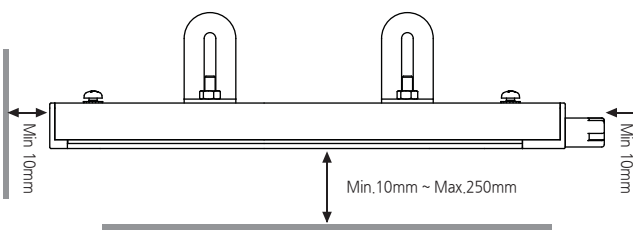
< Figure - 1 >



< Figure - 2 >

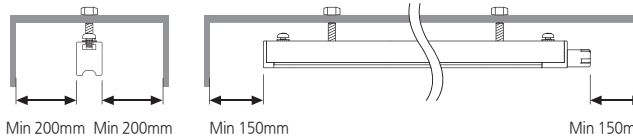


Distance for the Basic Installation



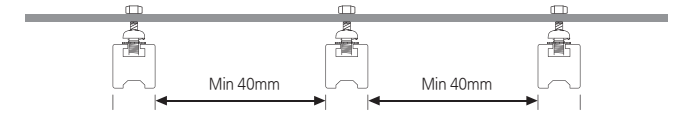
Interference by Grounding Matters

If there is any conductive object close to ion bar, SSB1 Series may not operate properly. Please install it with reference to figure below.



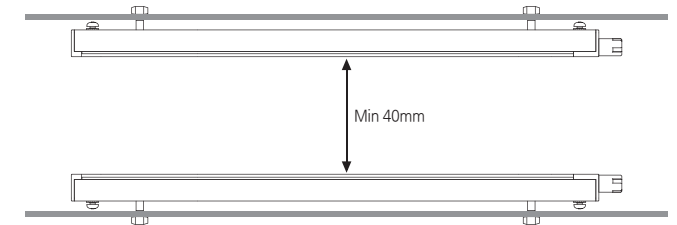
Side to Side Installation

When the more than two ion bars are installed, to avoid interference, the range between two ion bars should be more than 40mm.

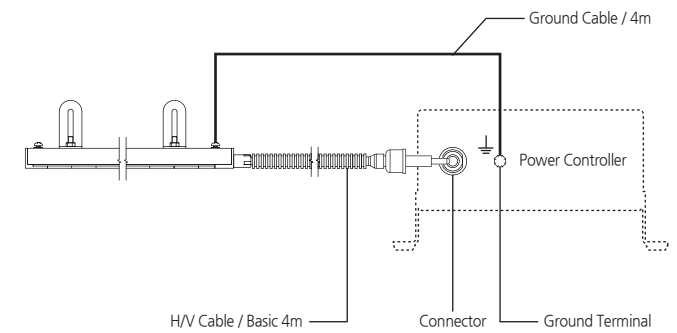


Face to Face Installation

When two ion bars are installed face to face, to avoid interference, the range between two ion bars should be more than 40mm.

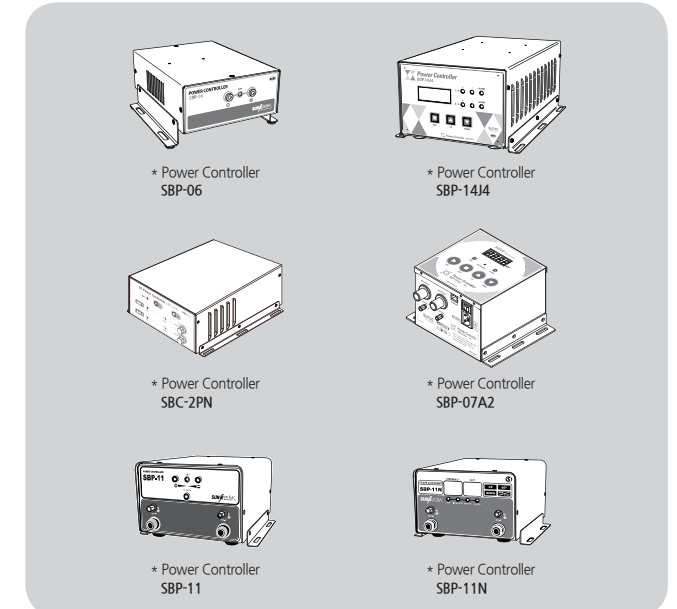


How to connect the power controller



Connectable Power Controller

SSB1 Series can be connected to the power controllers as below.

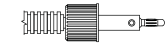



※ It does not affect to the performance even noise and vibration generated by the commercial frequency from high-voltage power.

CAUTION

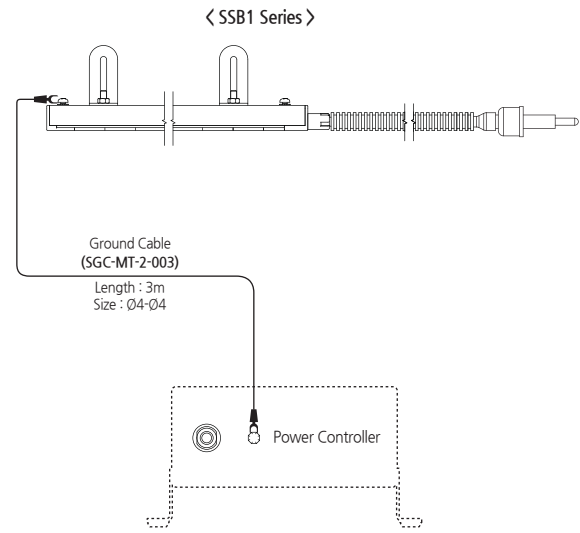
• Don't try to connect with the power controller that is not properly specified to install. It will be causes of malfunction or operation disorder.

▶ H/V Cable Connector

Connector	Power Controller
	SBP-07A2
	SBP-06, SBP-14J4, SBP-2PN, SBP-11, SBP-11N

▶ Ground connection

Connect the ion bar and controller with supported ground cable.



▶ H/V cable connection

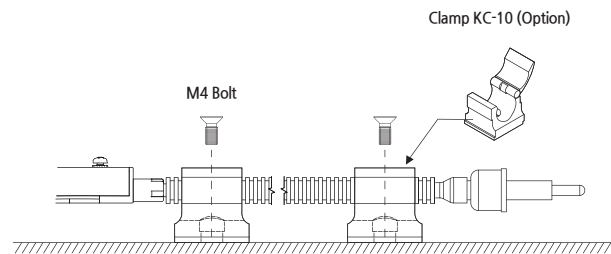
**CAUTION**

- Do not put any objects that can transfer electricity nearby the unit.
- Do not bend the high voltage cable or do not damage its wire when you are install.
- Offered H/V cable is suitable only for our goods. Please do not use any other H/V cable and also do not convert offered H/V cable into any other purpose.
- Please refrain from connecting H/V cable with any other wires or cables because of interference of high electric field. If you connect or set up them to H/V cable closely, it must be wired over than 200mm each other.

Also, if you wire H/V cables from more than two controllers which has different frequency or out-put voltage, please do not setup the H/V cable together.

Clamp (Option)

- Manufacturing Company & Model : KODUCT / KC-10B
- It is recommended that clamp is set up every 300mm.
- It is recommended that using M4 bolt.



6 Maintenance

Maintenance is an essential item for maintaining its capacity. Please conduct a routine maintenance according to the below description. The life time of a discharge needle can be a difference depending on using circumstance. SSB1 Series needs a routine maintenance and cleaning in case of bad circumstance.(high humidity or dust)

**CAUTION**

- This device uses the high level of voltage. When operating maintenance, please power off and unplug the device. Otherwise, there might be in case of electric shock or fire damage.
- The discharge needle is very sharp at the edge. Do not phsically(directly) touch the discharge needle.

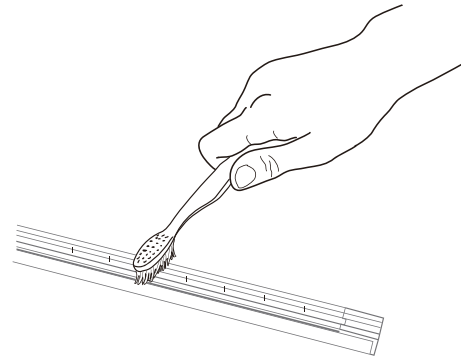
▶ Discharge needle cleaning

The contamination level of discharge needle is different among the areas where the user installs, please maintain own cleaning period that suits your environment.

- Brush Cleaning : weekly (or after using 168hr)
- Alcohol Cleaning : once per 3 month (or after using 2,160hr)

▶ Discharge needle cleaning procedure

- Be sure to power off before cleaning the ionizer.
- Use brush( nylon ) or air compressor to clean the dirt. (E.g. tooth brush)  
But, if you are in clean space, use cotton materials to clean.
- When there are any inks or oily dirt, apply alcohol(Methanol) or IPA in the cotton materials to wipe the dirty surface. But, do not forget to dry the cotton materials(first) before applying it. You need to clean once per every 3 month or after using 2,160 hours.
- After cleaning the controller, you can turn it back on.
- Record the date of you cleaned in the machine.



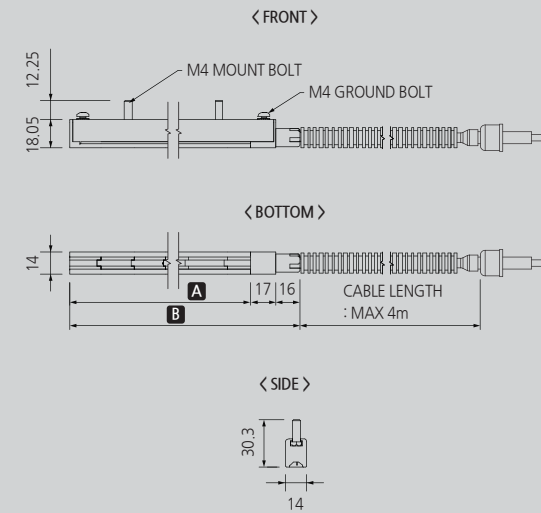
7 Problem solving

▶ Checklist before called

Problem	Identifying Problem	Solution
The product does not work.	Is your power cable still plugged in?	Please re-plug the power cable and then turn the device on again.
	Was the proper voltage level applied for this set-up?	Please use the proper level of power input for the device. (AC 100~240V, 50/60Hz)
	Is the swith off at back of the device?	Turn on the power switch.
	Is a fuse broken?	Replace the proper fuse immediately.
There is no ionization.	Is there any conductive material around the device?	Please refer to 'Installation & Connection, for setting the proper target distance from the device.
	Does the installed environment have too high/low level of humidity or temperature?	Please install the device upon the proper working specification.
	Can't possibly ground the device?	Please refer to 'Installation & Connection, for(proper) grounding the device.
	Any damages or cut on the cables?	You need to replace the cables if it gets cut or damaged.
The ionizing performance has been decreased.	Any contamination on the discharge needle?	Please refer to 'Maintenance, for cleaning the discharge needle.

8 Dimensions

▶ SSB1 Series

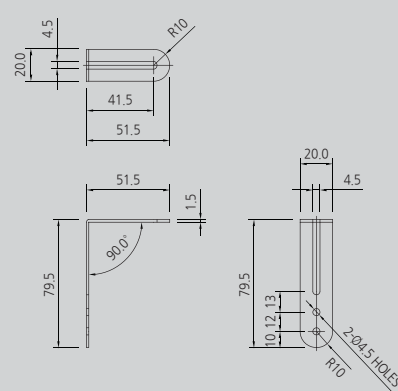


MODEL / DIMENSION					
No.	MODEL No.	TIP Q'TY	A	B	MOUNT BOLT Q'TY
1	SSB1-60	1	57	90	2
2	SSB1-100	3	101	134	2
3	SSB1-300	9	299	332	2
4	SSB1-500	16	497	530	2
5	SSB1-700	23	695	728	2
6	SSB1-900	29	893	926	2
7	SSB1-1100	36	1091	1124	3
8	SSB1-1300	43	1311	1344	3
9	SSB1-1500	50	1509	1542	3
10	SSB1-1700	56	1707	1740	3
11	SSB1-1900	63	1905	1938	3
12	SSB1-2100	70	2103	2136	4
13	SSB1-2300	76	2301	2334	4
14	SSB1-2500	83	2499	2532	4
15	SSB1-2700	89	2675	2708	4

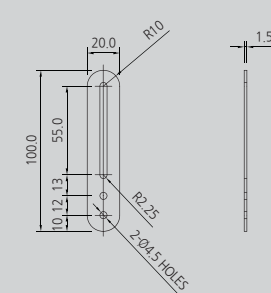
※ Above is based on only 1 SSB1 Series bar.

▶ Mount Bracket

a. 90° Angle Type Mount Bracket (Standard)



b. Straight Type Mount Bracket (Option)



9 Specification

▶ SSB1 Series

Parameter	Description / Value	Remarks	
Ion-Generation Method	Corona discharge Pulsed AC or DC		
Rated Voltage	Pulsed AC 10kVpp ±7%(Max.) DC ±9kV ±7%(Max.)	AC : SBP-14J4 / SBP-06 DC : SBC-2PN	
Structure	Direct-Coupled		
Ion Balance	Within ±50V at pulsed AC	100mm	
Ozone(O3) Concentration	≤0.05ppm		
Material	Main Body	Epoxy, MC Nylon	Level HB
	Cover	Aluminum	
	Electrode	Tungsten (Pitch : 30mm)	
	Cable Insulator	Silicone	
Operating distance	10 ~ 250mm	Non air pressure	
Operation Circumstance	0°C ~ +130°C(32 F ~ 266 F), 35% ~ 85% RH		
Dimensions	Please Refer to Dimension Drawing		
Tip Cleaning Cycle	1 Week	Electrode cleaning	
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

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