

# Instruction Manual

SUNJE

## SIB1 Series

Eng

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.
- \* Always use either one of the following materials for air supply; CDA(Celan Dry-Air) or N<sub>2</sub>. If there are any water or oil contamination in the air supply, it will cause malfunction or cause of accident.
- \* 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.

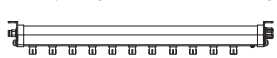
#### ⚠ CAUTION

- \* 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 when you use more than two units, 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.



Ion Bar  
SIB1 Series  
1ea



H/V Cable  
SHC-12-2-001  
4m / 1ea



Middle Bracket  
SBR-12-2-001  
0~3ea

#### ▶ Option

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



Connector Adapter  
SCA-BP-1-001

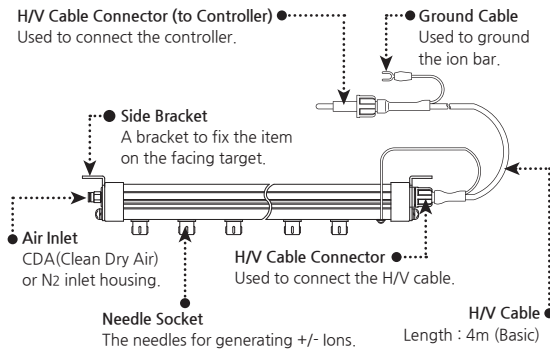


Connector Adapter  
SCA-BP-2-001

※ For the power controllers manufactured before 2021, you need to purchase a separate connector adapter. (See the table in the below)

Connector Adapter	Connectable Power Controller
SCA-BP-1-001	SBP-07A2
SCA-BP-2-001	SBP-06, SBP-14J4, SBP-11, SBP-11N

### 3 Nomenclatures of parts



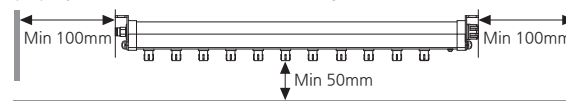
### 4 Installation and connection

#### ▶ Ion bar installation

When you install the ion bar, 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.

#### Interference by Grounding Matters

If there is any conductive object close to ion bar, SIB1 Series may not operate properly. Please install it with reference to figure below.



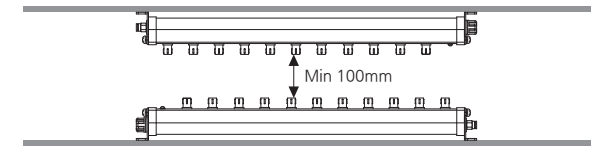
#### Side to Side Installation

When the more than two ion bars are installed, to avoid interference, the range between two ion bars should be more than 400mm.



#### 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 100mm.



#### Installation by Middle Brackets

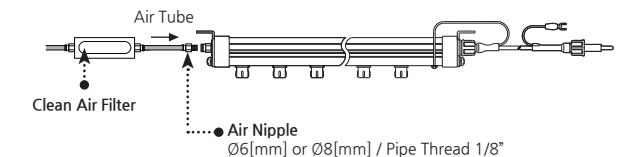
The middle bracket is used to protect bending problem by the weight of ion bar. Please fix the middle bracket with M5 bolts.

※ Recommended quantity for middle bracket

Model	Middle Bracket Quantity
SIB1-07A ~ 144A	-
SIB1-160A ~ 192A	1ea
SIB1-208A ~ 240A	2ea
SIB1-256A	3ea

#### ▶ Air supply method

- ⚠ CAUTION
- \* Air supply is one of the key factors.  
Please read the followings carefully in advance.
  - \* If many ion bars are connected to one air line, with air lack of pressure, it may have difficulty to provide proper performance.
  - \* If you pass the limit of pneumatic pressure for the unit, it causes the failure of the operation. Please, lower your air pressure of the air supply than the expected level.



※ Please use the proper air filter for your working environment.  
[We suggest you to use a clean air filter (Filteration:0.01μm) for clean environment.]

#### Types of Air Use

Please supply air into an ion bar either one of CDA(Clean Dry Air) or N<sub>2</sub> if possible. In the clean environment, we suggest you to use a clean air filter(Filteration:0.01μm) in order to pass impurities in the compressed air through the filter when using the ion bar.

#### Allowed Air Pressure

Allowable air pressure determination is strongly required when installing since the air pressure is relevant to ionizer performance. The maximum allowable working pressure is 0.3 MPa.  
Please, lower your air pressure of the air supply than the expected level.

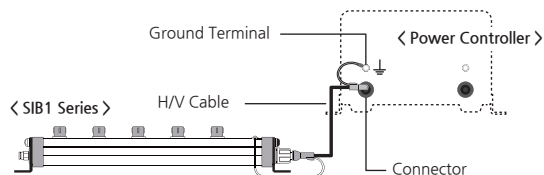
#### Air Nipple

Use a nipple gender for the air supply. Use Ø6 [mm] air tube for models less than 1,000mm and Ø8 [mm] air tube for more than 1,000mm.

### ■ Recommended Model (For Clean Nipple)

Material	Shape	Screw Size
Polypropylene (PP)	Straight or Elbow	Taper Screw 01(R1/8)

### ▶ How to connect the power controller



### Connectable Power Controller

SIB1 Series can be connected to the power controllers as below.

NO.	Model
1	SBP-06
2	SBP-14J4
3	SBP-07A2
4	SBP-11N
5	SBP-2N, 4N

※ 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.

## 5 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. SIB1 (N) 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 physically(directly) touch the discharge needle.  
\* When cleaning the discharge needle using an organic solvent, do not use the organic solvent to clean the socket around 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.

### ▶ Discharge needle cleaning order

- Be sure to power off before cleaning the ionizer.
- Please clean it as the table below.

#### ※ Cleaning with a cotton swab

After moistening a cotton swab with alcohol, wipe the discharge needle from side to side with the swab. (do not use acetone)

- Replace the damaged discharge needle.
- After the cleaning, let the alcohol applied to the discharge needle surface evaporate completely and then operate the Ion Bar.
- Please record the cleaning process as a reference in the file.

### ▶ Discharge needle maintenance

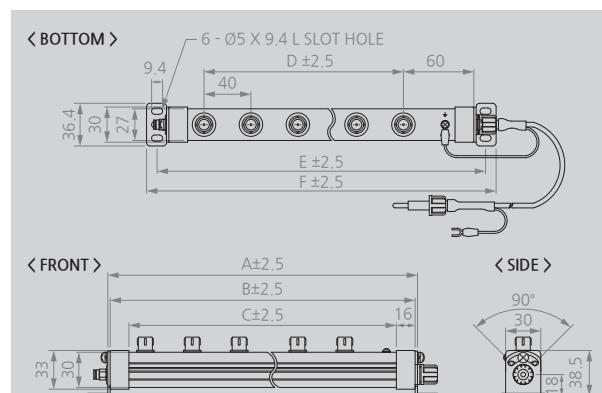
If the discharge needle broken or severely damaged, please replace the needle socket immediately.

## 6 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)
There is no ionization	Is there any conductive material around the device?	Please refer to 'Installation & Connection' for setting the proper target distance from device.
	Does the installed environment have too high/low level of humidity or temperature?	Please install the device upon the proper working specification.
The ionizing performance has been decreased.	Any damages or cut on the cables?	You need to replace the cables if it gets cut or damaged.
	Any contamination on the discharge needle?	Please refer to 'Maintenance' for cleaning the discharge needle.

## 7 Dimensions



No.	Model No.	Tip Q'ty	A	B	C	D	E	F	Middle BKT Q'ty
1	SIB1-07A	1	94	90	58	-	110	128	-
2	SIB1-16A	3	174	170	138	80	190	208	-
3	SIB1-20A	4	214	210	178	120	230	248	-
4	SIB1-32A	7	334	330	298	240	350	368	-
5	SIB1-48A	11	494	490	458	400	510	528	-
6	SIB1-64A	15	654	650	618	560	670	688	-
7	SIB1-80A	19	814	810	778	720	830	848	-
8	SIB1-96A	23	974	970	938	880	990	1008	-
9	SIB1-112A	27	1134	1130	1098	1040	1150	1168	-
10	SIB1-128A	31	1294	1290	1258	1200	1310	1328	-
11	SIB1-144A	35	1454	1450	1418	1360	1470	1488	-
12	SIB1-160A	39	1614	1610	1578	1520	1630	1648	1
13	SIB1-176A	43	1774	1770	1738	1680	1790	1808	1
14	SIB1-192A	47	1934	1930	1898	1840	1950	1968	1
15	SIB1-208A	51	2094	2090	2058	2000	2110	2128	2
16	SIB1-224A	55	2254	2250	2218	2160	2270	2288	2
17	SIB1-240A	59	2414	2410	2378	2320	2430	2448	2
18	SIB1-256A	63	2574	2570	2538	2480	2590	2608	3

## 8 Specification

Parameter	Description / Value
Ion-Generation Method	Corona Discharge Pulse AC
Air Purge Supply Pressure	≤0.3MPa (CDA, N <sub>2</sub> )
Air Purge Connection Port	Pipe Thread 1/8"
Ion Balance	within ±50V (1,000mm)
Operating Distance	50mm ~ 2,000mm
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Ozone(O <sub>3</sub> ) Concentration	≤0.05ppm
Main Body Material	Non-Flammable ABS (Level V0)
Electrode Material	Standard : Tungsten Option : Silicon, Titanium
Electrode Replacement	Cartridge type
Mounting Method	Bolt Mounting with Bracket Insulation Cable 4m
High Voltage Cable	(UL3239_20kV - 1007AWG18)
Warranty	1 year

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

### ! CAUTION

\* Handle with care. Warranty doesn't cover mishandling damage.

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