



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

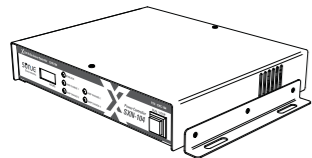
- Do not fabricate or do maintenance by yourself. Malfunction, Electric shock, and fire danger are considered. Contact us directly if you need the item to be repaired.
- Do not let the water touch the product. It may cause electric shock or fire due to malfunction.
- When you check or maintain the product, make it sure you turn off the power. It may cause electric shock or fire due to malfunction.
- The item should be fixed to the target tightly. Electric discharging or breakage might happen.
- 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 disconnect the head cable with power applied. There is a possibility of electric shock or malfunction.
- Connect wires referring to the product manual. Wrong connection can cause failures.
- For your proper cable connection, take a look at the manual "Installation & Connection," for references. Any disordered connection is detected, the malfunction might arise.
- All cables should be connected all the time. Please careful of cable disconnections. If power or communication cables got damaged, replace them immediately. Malfunction and fire danger may happen.
- 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 item off the range of usage(Electrostatic elimination). Malfunction or danger of accident may occur.

2 Check the package contents

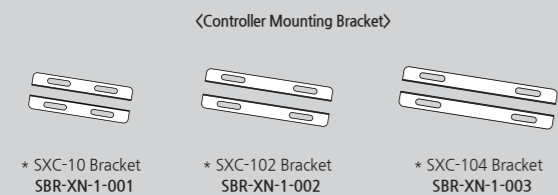
- Product compositions
- The package includes the following products composition.



Controller  
SXC-10 or SXC-102 or SXC-104  
1 ea

- Output Cable (SOC-XN-2-001) 15m / 1~4ea
- Indicator Cable (SIC-XN-2-001) 3Pin / 5m / 1ea
- Power Cable (SPC-MT-1-001) AC 100V, 50/60Hz, 1.8m / 1ea
- Interlock Cable (SIC-XN-1-001) 5m / 1ea
- Power Cable (SPC-MT-2-001) AC 220V, 50/60Hz, 1.8m / 1ea
- Remote Cable (SRC-XN-1-001) 5m / 1ea

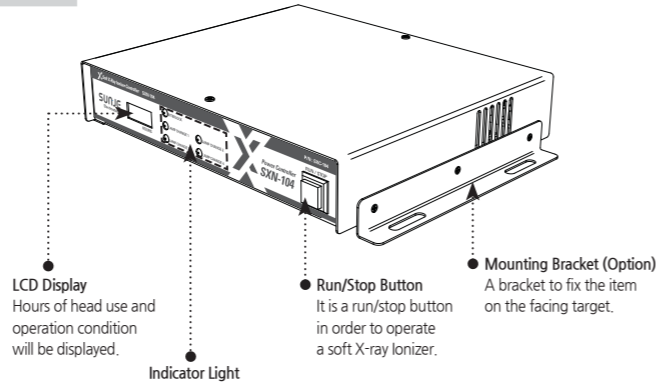
- Option
- If you require extra functions with the basic accessories we provided, you need to purchase optional items in below for further assistant.



3 Nomenclatures of parts

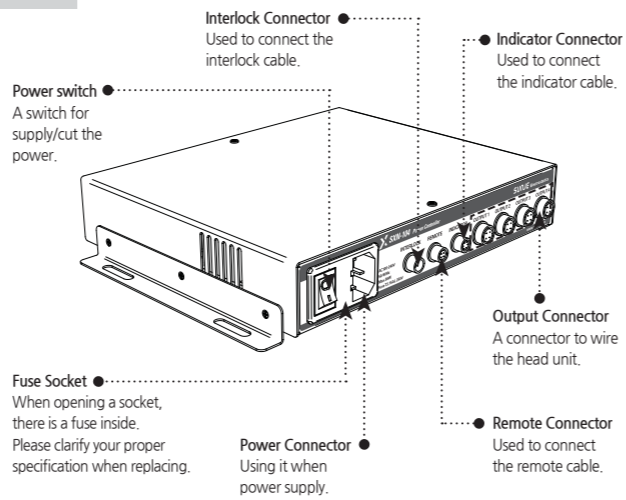
※ The following is a standard image of SXC-104. The image might differ according to other models.

Front



- LAMP CHANGE 1/2/3/4: Lamp Change LED. When these cases, red LED will be on. a. Soft X-ray tube life time end. b. Some troubles with soft X-ray tube.
- INTERLOCK: Interlock LED. If an interlock function works normally, the yellow LED will be on.

Rear



4 Installation and connection

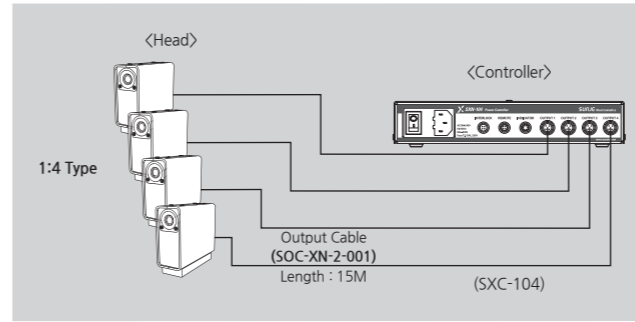
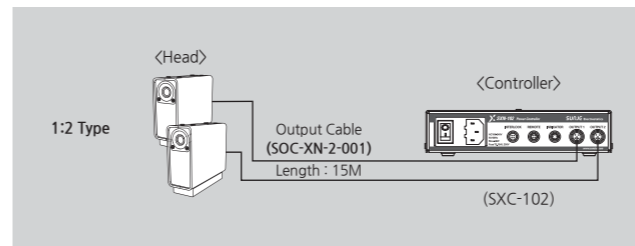
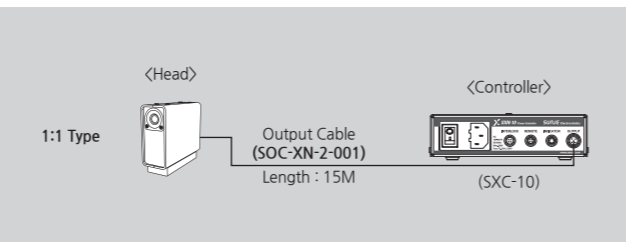
▶ Soft X-ray Ionizer connectable with SXC-10 Series

No.	5kV	10kV	13kV	15kV
1	No connection products	SXH-10H	SXH-13HS	No connection products
2		SXH-10F		
3		SXH-10F(F)		
4		SXH-10C		
5		SXH-10L3		
6		SXH-10HS		
7		SXH-10SH		

▶ How to connect

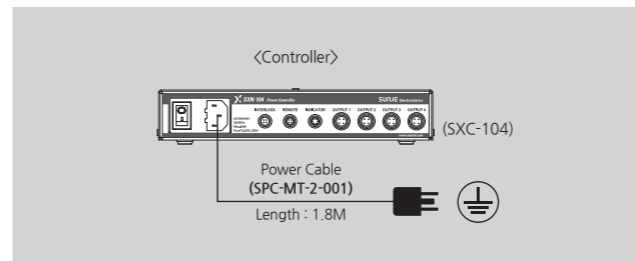
Connecting to the Head Unit

Please connect the head unit and controller with supported "Head Cable".



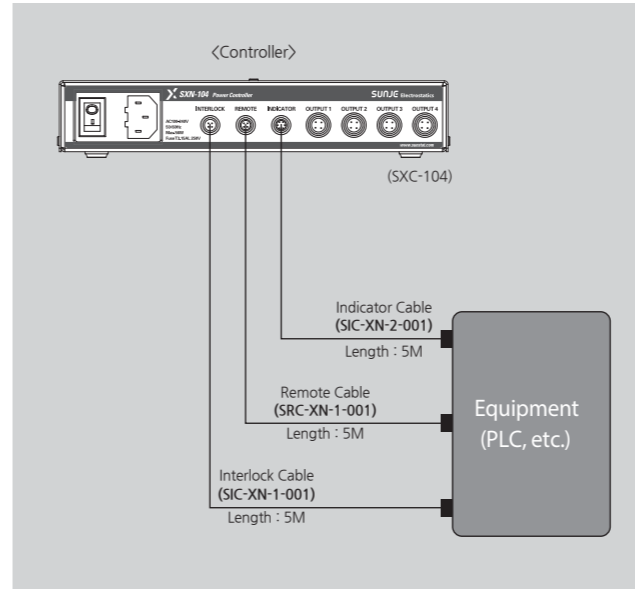
How to Connect Earth Ground and Power Supply

Using supported ground and power cables to connect the controller.



Connecting the Interlock / Remote / Indicator

Please connect the controller and external machinery equipment with supported "Interlock / Remote / Indicator Cable".



5 How to set

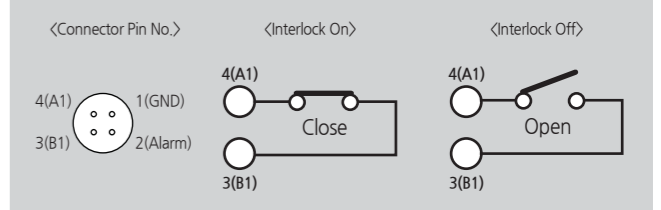
▶ Set the interlock

Interlock On

If #3(B1) and #5(A1) of a Interlock Cable are connected, the interlock is on. When LED is on, it shows that the door is securely locked and totally shielded.

Interlock Off

If #3(B1) and #5(A1) of a Interlock Cable are disconnected, the interlock is off. When LED is off, it shows that the door is securely unlocked and not shielded well.



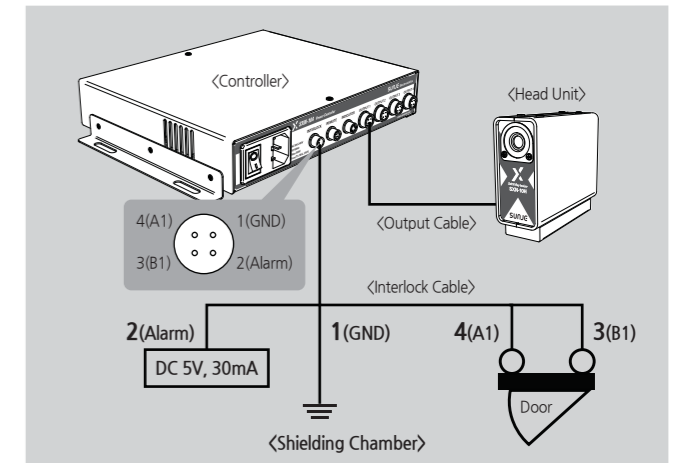
Article	Interlock On	Interlock Off
Pin No.	3(B1) - 4(A1) Close	3(B1) - 4(A1) Open
State	The shield door is closed	The shield door is open
Meaning	Normal Operation standby	Abnormal operation standby

Alarm output

Alarm will be output when the head turns on abnormally in shutdown condition of controller.

Article	Abnormal Condition	Normal Condition
Pin No.	2(Alarm)	2(Alarm)
State	DC 5V, 30mA output	0V

Example of Interlocking system



CAUTION

If the soft X-ray is exposed directly to human, it harms badly. Please use the interlock function when using the X-ray device. If the door gets opened when the device is in operation, the device automatically stops because the interlock gets disconnected from the electrical circuit. If the door gets closed or the interlock is connected to electrical circuit, the device will be in run condition again.

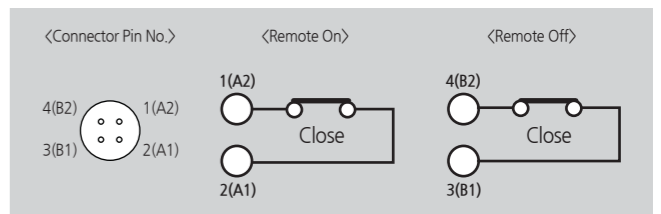
▶ Set the remote

Remote On

If #1(A2) and #2(A1) of a remote cable are connected, the remote is on. Remote on means that the head unit is operating.

Remote Off

If #3(B1) and #4(B2) of a remote cable are disconnected, the remote is off. Remote off means that the head unit is not operating.



Article	Remote On	Remote Off
Pin No.	1(A2) - 2(A1) Close	4(B2) - 3(B1) Close
State	Ion starts forming	Ion stops forming

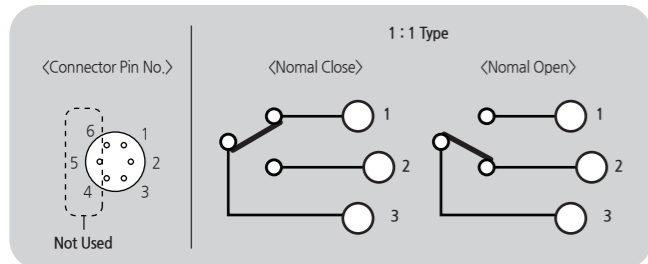
► Indicator

**Normal Close (Normal)**

If the device is in normal condition, it becomes "Normal Close".  
The term of "Normal Close" stands that the contact between indicator cable #1 and #3 have been closed.

**Normal Open (Alarm)**

If the device alarms during operation, it becomes "Normal Open".  
The term of "Normal Open" stands that the contact between indicator Cable #1 and #2 have been closed.



1 : 2 Type		1 : 4 Type	
Pin No.	Function	Pin No.	Function
1	Normal Close	1	OUT3 - Normal Close
2	Normal Open	2	OUT4 - Normal Close
3	Com. 2	3	Com. (White)
4	Normal Close	4	Com. (Yellow)
5	Normal Open	5	OUT1 - Normal Close
6	Com. 1	6	OUT2 - Normal Close

► How to operate

Please operate the device followed by the order of the provided chart.

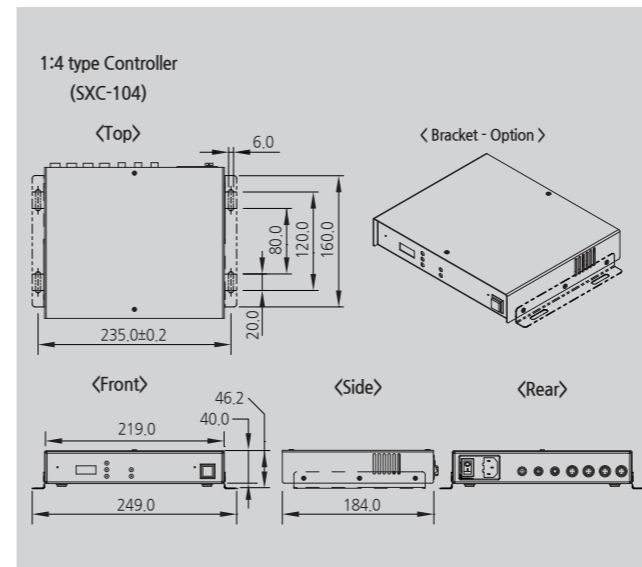
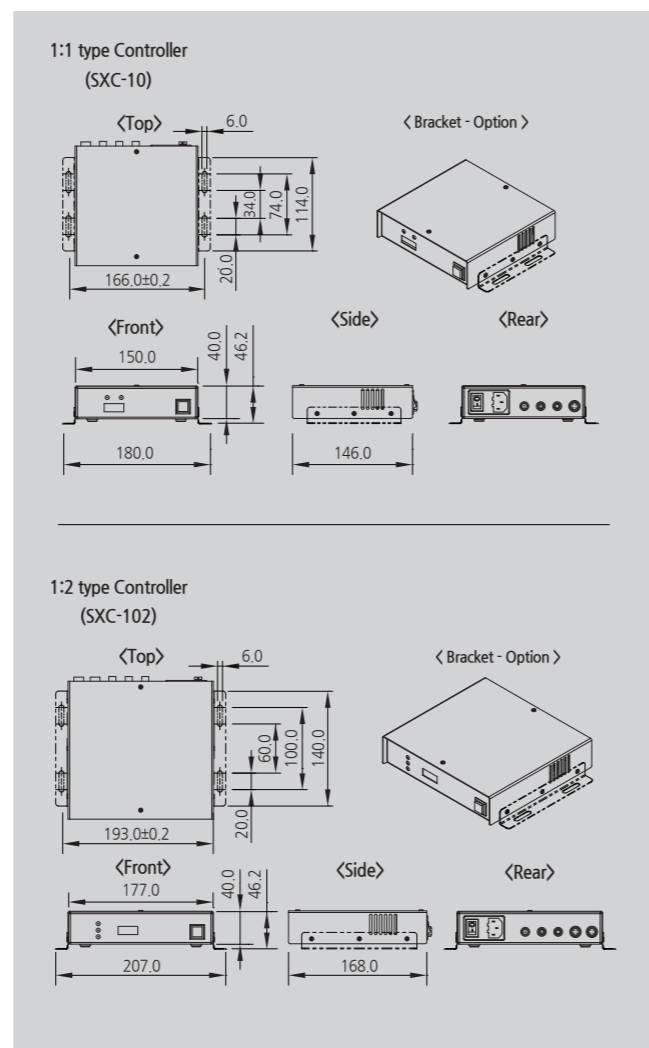
Order	Contents
1	The head unit(SXH-10H) must be installed in the inside of the shielded chamber.
2	Check the ability to shield X-ray of the equipment with head unit(SXH-10H) and confirm that the interlock lamp on the controller of Terminator lights.
3	Check the interlock system again
4	Check that the operating lamp of head unit(SXH-10H) lights when soft X-ray ionizer turns on.
5	Measure the level of radiation by survey meter when soft X-ray ionizer turns on. The result must be under 10 $\mu$ Sv/hr.(Comply with the regulations of country which soft X-ray ionizer install. ex.) Korea - 10 $\mu$ Sv/hr)

6 Problem solving

► Checklist before called

Problem	Identifying Problem	Solution
Not Operating	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 switch off at back of the controller?	Turn on the power switch.
	Is a fuse broken?	Replace the proper fuse immediately.
	Is there any Alarm LED on the head unit of device?	Purchase and replace the tube unit(replaceable).
	Is remote off?	Clear the remote off corresponding to "Remote Setup" manual.
No Signal	Is Interlock off?	Place Interlock on corresponding to "Interlock setup" manual.
	Have you followed the proper procedure for Input/output signal cable(s)?	Check whether the cable connection is properly done.
Decreased Performance	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.
Head unit not working (when pressing Run button on the controller)	Is the remote off control on your machine?	Clear the Remote off on your machine.

7 Dimensions



8 Specification

Parameter	Description / Value	Remarks	
Input Power	AC 100~240V, 50/60Hz		
Power Consumption	SXC-10	26W	with Head
	SXC-102	47W	
	SXC-104	56W	
Fuse	250V, 3A, 5X20 Glass Type Fuse		
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH		
Weight	SXC-10	0.73kg	
	SXC-102	0.97kg	
	SXC-104	1.22kg	
Dimensions	Please Refer to Dimension Drawing		
Alarm	Head Fail, Head Abnormal		
Warning	Life Time Over		
Interlock	Interlock On/Off Control		
Remote	Remote On/Off Control		
Interface Output	Power State, Interface State, Run State, Alarm State		
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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