



**User Manual**

**用户手册**

**Air Sterilizer**

**空气消毒机**

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# 1 Introduction

## 1.1 Preface

This manual can only be used to guide the installation and operation of air sterilizer. The manual contains the functional description and regular maintenance of the unit.

## 2 Safety notes

In order to use the equipment correctly, the following safety notes need to be strictly observed:

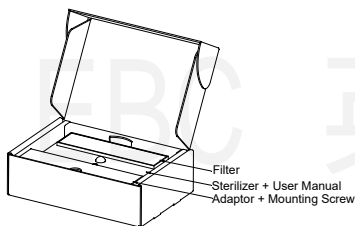
- Assembly, installation and maintenance can only be carried out by specially trained professionals.
- Do not block the air inlet or outlet of the internal or external air sterilizer.
- Only original spare parts and accessories can be used.
- Do not make any changes to the air sterilizer described in the manual.
- The connection between the power adapter and the sterilizer shall be firm to prevent damage to the sterilizer due to poor contact.

- There is harmful ultraviolet light source inside the sterilizer. In case of leakage, please cut off the power immediately and contact the after-sales personnel.
- Electrical connection and any maintenance can only be carried out by authorized professionals.

## 3 Product description

Air sterilizer is a kind of disinfection product developed for elevator and other narrow space and the occasion of personnel flow. It adopts nano slow-release disinfection technology, with sterilization efficiency  $\geq 99\%$  and disinfection efficiency  $\geq 98\%$ . The product is small in size, and can be quickly installed on the side wall of the car with 3M strong double-sided tape. At the same time, it is designed with large air volume, which can ensure the rapid disinfection of polluted air in the car.

### 3.1 Main components



### 3.2 Operating conditions

Input voltage of adapter	1~,100-240V, 50/60Hz
Output voltage of adapter	24 VDC
Operating temperature range	-20~45℃

Note:

Please read the nameplate parameters on the sterilizer carefully. The actual technical

parameters shall be subject to the nameplate.

### 3.3 Correct use

The air sterilizer is developed and designed according to the existing technology and recognized technical safety rules. However, if not used properly, the sterilizer may pose a threat to life and limb, or cause property damage. Please install and use this product in strict accordance with the user manual. The manufacturer shall not be responsible for any damage caused by improper use or assembly, installation and use, and all risks shall be borne by the user.

## 4 Installation

### 4.1 Installation position

Please observe the following regulations when selecting the installation site.

- Please reserve the top wiring and operation space, and the diameter of the wire hole is not less than 20 mm. In consideration of subsequent maintenance, it is recommended to

reserve a space of 150 mm-300 mm between the top of the product and the top of the car, as shown in Figure 4.1.

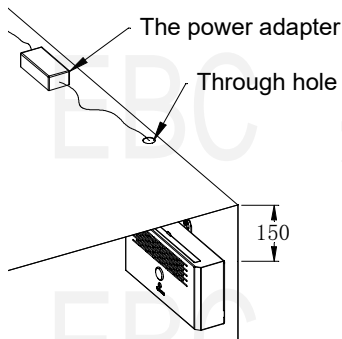


Figure 4.1 Wiring diagram

- It is recommended to be free of oil stains and dust.
- It is recommended to install the air sterilizer on both sides of the entrance door.
- The ambient temperature shall be within the allowable range of the equipment.
- The power specifications specified on the equipment nameplate must be guaranteed.

## 4.2 Installation requirements

### 4.2.1 General requirements

- Before unpacking, carefully check whether the package is damaged. Any packaging damage may be the cause of subsequent functional failure.
- After unpacking, please first count the items in the box and confirm that the products and accessories are complete.
- Before handling packaging materials, make sure that there are no loose parts inside.
- In order to protect the environment, we suggest to recycle it.

## 4.3 Installation and maintenance

### 4.3.1 Mechanical installation

Before installing the sterilizer, please check the accessory package. The following two installation methods are based on whether there is vibration in the use environment, choose one of the two. Installation method one:

- 1) Remove the screws on the fixing plate of the sterilizer, pull the fixing plate

vertically upward to the top, and screw in the screws again, as shown in Figure 4.2;

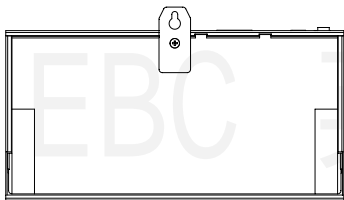


Figure 4.2 Schematic diagram of fixed piece installation status

- 2) Punch the bottom hole and screw the side wall of the car 150 mm from the top. (it is recommended that the plate below 1.8mm does not need bottom hole. 1.8 ~ 2.5 plate thickness positioning holes can be drilled 4.6mm. Adjust the torque from small to large according to the thickness of the plate and the material, so as to avoid the screw breaking due to excessive torque).

Note:

Some distance (4mm-10 mm recommended) shall be reserved for the installation of screws to hang the sterilizer.

See Figure 4.3 for the schematic diagram of installation status;

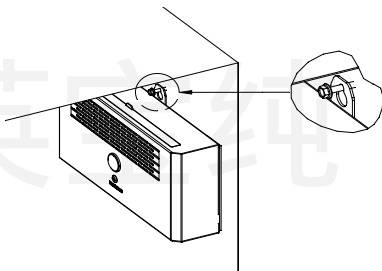


Figure 4.3 Installation diagram

- 3) Remove the 3M strong adhesive tape release paper on the back of the sterilizer. As shown in Figure 4.4;

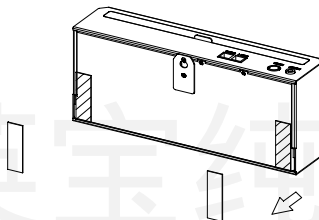


Figure 4.4 Paste diagram

4) Hang the sterilizer on the mounting screw. Tighten the tapping screw with the adjustable hexagon wrench, as shown in Figure 4.5.

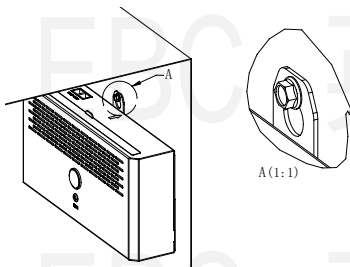


Figure 4.5 Schematic diagram of tightening state of screw

Installation method two:

1) Remove the screws on the fixing plate of the sterilizer and pull the fixing plate straight up to the top, and re-install the screws, as shown in Figure 4.6;

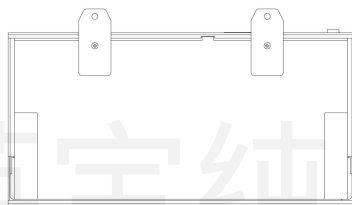


Figure 4.6 Schematic diagram of the installation state of the dual fixing plate

2) Punch two bottom holes 150mm horizontally apart from the top of the car on the side wall of the car 150mm, and fix the fixing plate with screws; (it is recommended that the bottom hole is not required for the plate under 1.8mm; the positioning hole of the plate thickness of 1.8~2.5 can be used. 4.6mm. Adjust the torque from small to large according to the thickness of the plate and the material, so as not to twist the screw due to excessive torque. No need to tear off the 3M strong tape.)

### 4.3.2 Electrical installation

Take out the power adapter in the accessory package, connect the antivirus machine and fix the cable reliably. As shown in Figure 4.7.

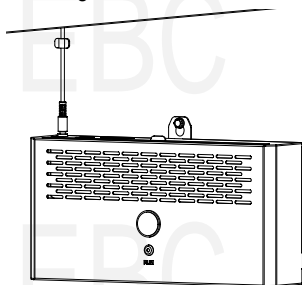


Figure 4.7 Wiring diagram of power adapter

#### **Note:**

High input voltage of adapter may cause product damage. Please connect the power supply according to the voltage requirements indicated on the nameplate.

#### **Note:**

In order to avoid any destructive effects, please connect the sterilizer with a triangular plug with grounding.

### 4.3.3 Filter maintenance

The air sterilizer is equipped with nano slow-release disinfection filter. The filter needs to be maintained regularly. It is recommended to replace it once every 3 months.

Please refer to the following steps:

- 1) Lift up the filter bracket from the top of the sterilizer, as shown in Figure 4.8;

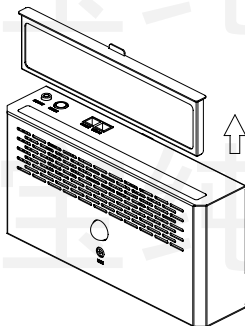


Figure 4.8 Filter maintenance diagram

- 2) Remove the filter from the filter bracket, as shown in Figure 4.9;



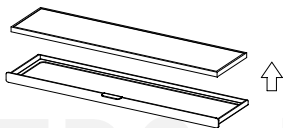


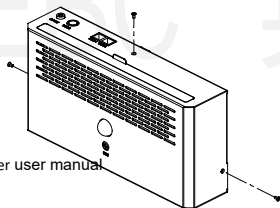
Figure 4.9 Filter maintenance diagram

- 3) Carry out the reverse operation according to the above steps, and install the new filter back into the sterilizer.

#### 4.3.4 Maintenance of photocatalyst components

After the best use period, the sterilization ability of photocatalyst components of the sterilizer will decline, so it needs to be replaced in time to ensure the sterilization effect. When replacing, please follow the steps below:

- 1) Please confirm that the power supply has been cut off before maintenance;
- 2) Remove the three screws on the top



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and both sides of the sterilizer, as shown in Figure 4.10;

Figure 4.10 Schematic diagram of photocatalyst component maintenance step 2

- 3) Move the housing outward to expose the photocatalyst assembly, as shown in Figure 4.11;

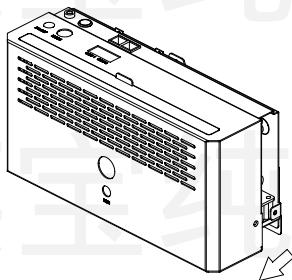


Figure 4.11 Schematic diagram of photocatalyst component maintenance step 3

- 4) Slowly push photocatalyst components out of the buckle. As shown in Figure 4.12;

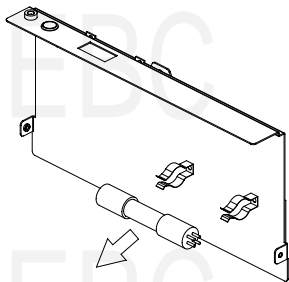


Figure 4.12 Schematic diagram of photocatalyst component maintenance step 4

- 5) After replacing the new photocatalyst components, reverse the above steps to complete the final installation.

**Note:**

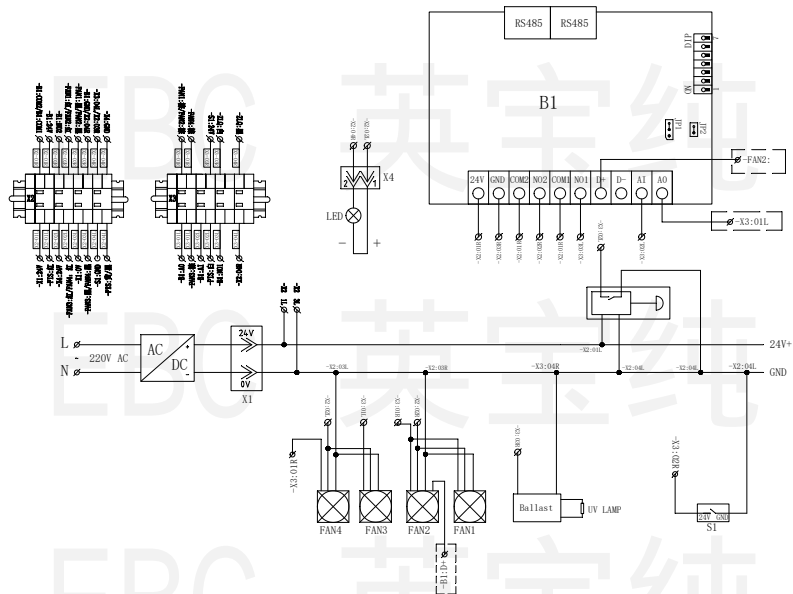
The lamp tube is fragile glass product, please wear gloves and other protection before operation to prevent injury. Please DO NOT remove photocatalyst from the UV lamp

#### 4.4 Common faults and troubleshooting

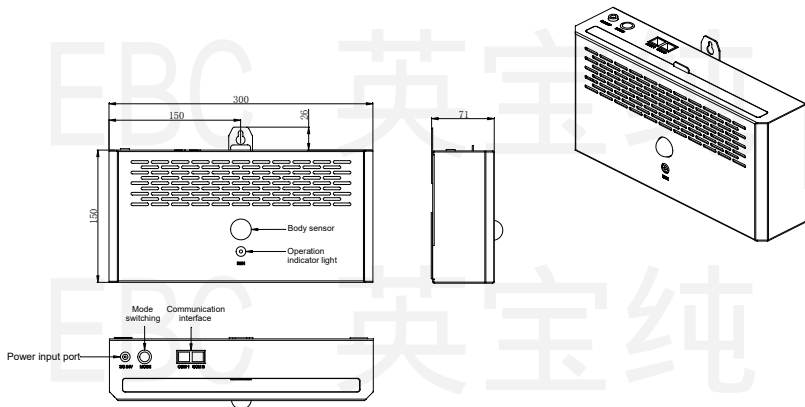
Phenomenon	Possible causes	Method
The whole machine does not operate	Loose power supply	Check whether the power supply is in good
	Body sensor does not work	Restart the whole machine
The air volume is weak	Dirty filter	Replace the new filter and maintain it regularly.
	Fan damaged	Contact after-sales service personnel to replace the fan.

Running indicator light off	Loose power supply	Check whether the power supply is loose
	Indicator light damaged	Contact after-sales service personnel for replacement.
Abnormal noise of filter	Filter installation error	Check whether the installation direction of the filter is correct.
The fan does not turn	Fan damaged	Contact after-sales service personnel to replace the fan.

## 5 Electrical schematic diagram



## 6 Overall dimension and interface description



Power input port :DC 24V

Communication interface : RS485 communication

Mode switching : switching between intelligent operation and forced operation

Operation indicator light : green when the product is in normal operation, no light when it is in fault or power failure

Body sensor :Biometric module

## 7 Operation mode Introduction

when the sterilizer detects that there is someone in the elevator, it will delay about 1s to turn on the fan and UV light and enter the disinfection mode; when it detects that the person leaves the elevator, it will delay 30min to turn off the fan and UV light and enter the standby mode. Note: the effective sensing distance in horizontal direction and vertical direction of infrared induction is 4m and 3M respectively. It should be avoided to expose the sterilizer to strong light and heat source, otherwise it will affect the normal operation of the sterilizer.

Introduction to the forced operation mode: press the button of the forced operation switch of the sterilizer to directly put the sterilizer into the disinfection mode; turn off the forced operation switch, and the sterilizer will delay 30 minutes to turn off the fan and UV light.

## 8 Barcode description

The date of manufacture and serial number on the barcode is showed as follows:



<b>M</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Manufacture definition</b>													<b>Year Month Day    Serial number</b>								

The first 13 bit (M019058000200) is the manufacture definition.

The value of 14~18 bit (20501) stands for the date of manufacture: May 01, 2020(A/B/C: October/November/December).

The last 4 bit (0001) stands for the serial number of the same batch.

## 9 Product guarantee

1. The warranty period of the product is 12 months.
2. The user must follow the installation instructions in this manual to obtain the product quality assurance service provided by the manufacturer.

Faults caused by any of the following reasons are not covered by our Warranty:

- The warranty period has expired;
- Failing to provide the factory number of the product;
- Faults caused by operation in abnormal conditions or environment, or improper installation, maintenance or operation not specified in the operation manual;
- Faults not caused by this equipment, such as those caused by user's equipment, user's software, etc;
- Damage caused by replacement or disassembly of product parts by users, or damage caused by disassembly and repair by unauthorized maintenance service personnel;
- Failure caused by force majeure such as fire, earthquake and flood.

Life of main components:

UV lamp: 6000 hours

Fan: 70,000 hours

# 1. 简介

## 1.1 前言

本手册只能用于指导空气消毒机的安装和操作。手册内容包含机组的功能描述和定期维护的操作方法。

## 2. 安全注意事项

为正确使用设备，需要严格遵守以下安全注意事项：

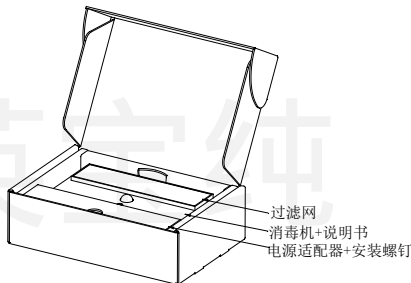
- 组装，安装和维修只能由经过专门培训的专业人员进行。
- 请勿堵塞内部或外部空气消毒机的进风口或出风口。
- 只能使用原装备件和配件。
- 不要对说明书中描述的空气消毒机进行任何更改。
- 电源适配器与消毒机的连接要牢固，防止接触不良损坏消毒机。
- 消毒机内部存在对人体有害紫外线光源，当出现泄漏时，请立刻切断电源，并与售后人员联系。
- 电气连接和任何维修只能由授权的专业人员进行。

## 3. 产品描述

空气消毒机是针对电梯等狭小空间且有人

员流动的场所而开发的一款消毒产品。采用纳米缓释消毒技术，杀菌效率 $\geq 99\%$ ，杀毒效率 $\geq 98\%$ 。本产品体积小，采用 3M 强力双面胶带能够快速的安装于轿厢侧壁。同时设计风量大，能够保证轿厢内污染空气快速消毒处理。

### 3.1 主要组成



### 3.2 运行条件

适配器输入电压	1~,100-240V,50/60Hz
适配器输出电压	24 VDC
工作温度范围	-20~45℃

**注意：**消毒机上的铭牌参数请用户请仔细阅读，实际使用技术参数以铭牌标称为准。



### 3.3 正确使用

空气消毒机是根据现有技术和公认的技术安全规则而开发设计。不过，如果使用不当，可能对生命和肢体造成威胁，或造成财产损失。本产品安装使用请严格按照用户手册进行安装和使用。制造商对因使用或组装、安装和使用不正确导致的任何损害概不负责，所有风险均由用户承担。

## 4. 安装

### 4.1 安装位置

选择安装地点时，请遵守以下规定。

- 请预留顶部走线和操作空间，并且过线孔直径建议不小于 20mm；同时考虑到后续维护，建议产品顶部与轿厢顶部预留 150mm-300mm 空间，如图 4.1。

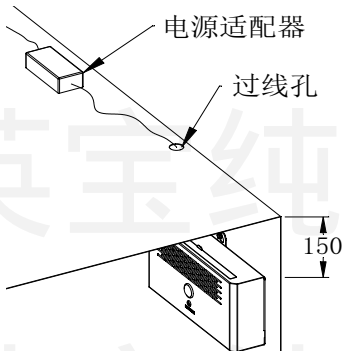


图 4.1 走线示意图

- 该地点建议无油渍和灰尘。
- 空气消毒机建议在进门两侧壁挂安装。
- 环境温度需要在设备允许的范围內。
- 必须保证设备铭牌上规定的电源规格。

### 4.2 安装说明

#### 4.2.1 一般要求

- 开箱前及开箱时应当仔细检查包装是否有损坏的迹象。任何包装损坏可能是后续功能故障的原因。
- 开箱后请首先清点箱内物品，确认产品和附件齐全。

- 处理包装材料前，务必确认里面没有任何松动的部件。
- 为了保护环境，我们建议对包装纸箱进行回收利用。

## 4.3 安装与维护

### 4.3.1 机械安装

消毒机安装前请清点附件包，以下两种安装方式根据使用环境是否存在振动，二选一。  
安装方式一：

- 1) 将消毒机固定片上的螺钉取下并竖直向上拉固定片到顶部，重新打上螺钉，如图 4.2；

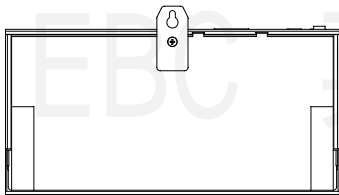


图 4.2 安装固定片状态示意图

- 2) 在轿厢侧壁距离顶部 150 毫米的位置打底孔，并打上螺钉；（建议 1.8mm 以下的板材无需打底孔；1.8~2.5 的板厚定位孔可打 4.6mm。根据板厚的不同和材料的不同从小到大来调整扭力，以免扭力

过大将螺钉扭断）

#### 注意：

安装螺钉需要留有部分距离(建议在 4mm-10mm 之间)用来悬挂消毒机，安装状态示意图如图 4.3；

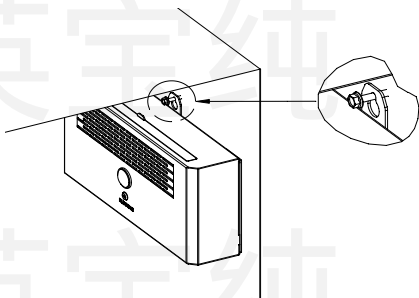


图 4.3 安装螺钉状态示意图

- 3) 撕掉消毒机背面的 3M 强力胶带离型纸，如图 4.4；

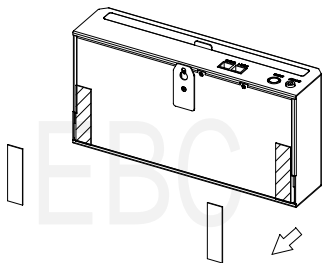


图 4.4 粘贴示意图

- 4) 将消毒机挂在安装螺钉上。并用活动六角扳手将自攻螺钉旋紧，如图 4.5。

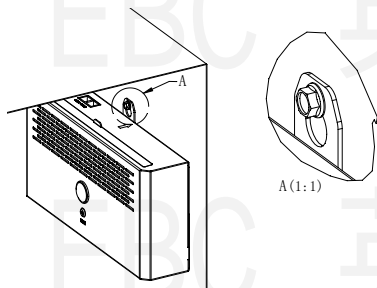


图 4.5 安装螺钉旋紧状态示意图

安装方式二：

- 2) 将消毒机固定片上的螺钉取下并竖直向上拉固定片到顶部，重新打上螺钉，如图 4.6；

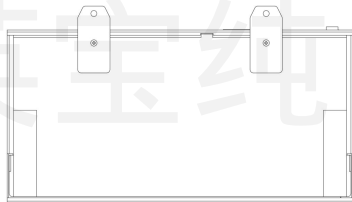


图 4.6 安装双固定片状态示意图

- 2) 在轿厢侧壁距离顶部 150 毫米的位置打两个水平相距 150mm 的底孔，用螺钉将固定片固定住；（建议 1.8mm 以下的板材无需打底孔；1.8~2.5 的板厚定位孔可 4.6mm。根据板厚的不同和材料的不同从小到大来调整扭力，以免扭力过大将螺钉扭断。无需撕掉 3M 强力胶带。）

### 4.3.2 电气安装

取出附件包中的电源适配器，连接杀毒机，并可靠固定线缆，如图 4.7。

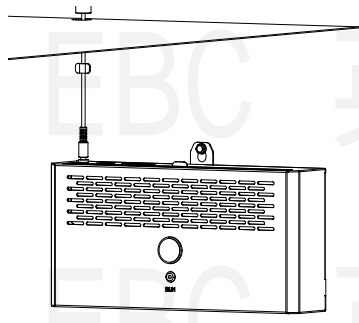


图 4.7 电源适配器接线示意图

#### 注意：

适配器输入电压过高可能导致产品损坏。请按照铭牌标注的电压要求接通电源。

#### 注意：

为了避免任何破坏性的影响，接通消毒机请采用带接地的三角插头进行连接。

### 4.3.3 过滤器的维护

空气消毒机配有纳米缓释消毒过滤器。过滤器需进行定期维护，建议运行 3 个月更换一次。

维护过滤器请参考以下步骤：

- 1) 从消毒机顶部向上提过滤器支架，如图 4.8；

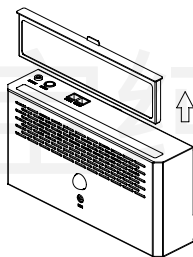


图 4.8 过滤器维护示意图

- 2) 从过滤器托架上将过滤器换下，如图 4.9；

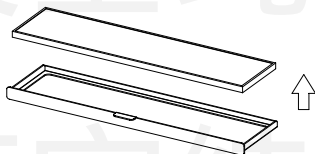


图 4.9 过滤器维护示意图

- 3) 按以上步骤反向操作，将新的过滤器装回消毒机。

### 4.3.4 光触媒组件的维护

光触媒组件超过最佳使用期后，消毒机杀菌能力会下降，因此需要及时更换，保证杀菌的效果。更换时请按照以下步骤进行更换：

- 1) 维护之前请确认电源已经切断；
- 2) 将位于消毒机顶部、两侧的三颗螺钉取下，如图 4.10；

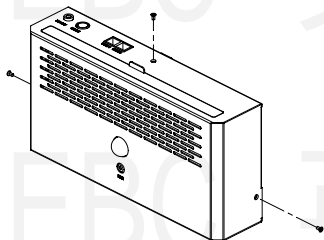


图 4.10 光触媒组件维护步骤二示意图

- 3) 将外壳向外移动，露出光触媒组件，如图 4.11；

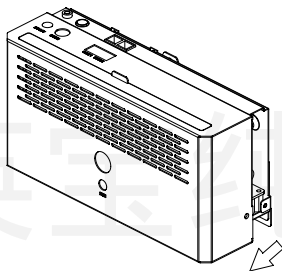


图 4.11 光触媒组件维护步骤三示意图

- 4) 将光触媒组件从卡扣中取出，并将新的光触媒备件安装在卡扣上。如图 4.12；

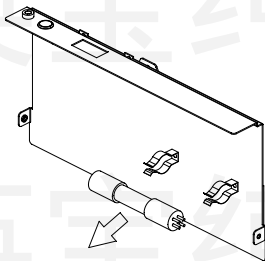


图 4.12 光触媒组件维护步骤四示意图

- 5) 更换新的光触媒组件以后,按照以上步骤  
逆向操作, 完成最后安装。

**注意:**

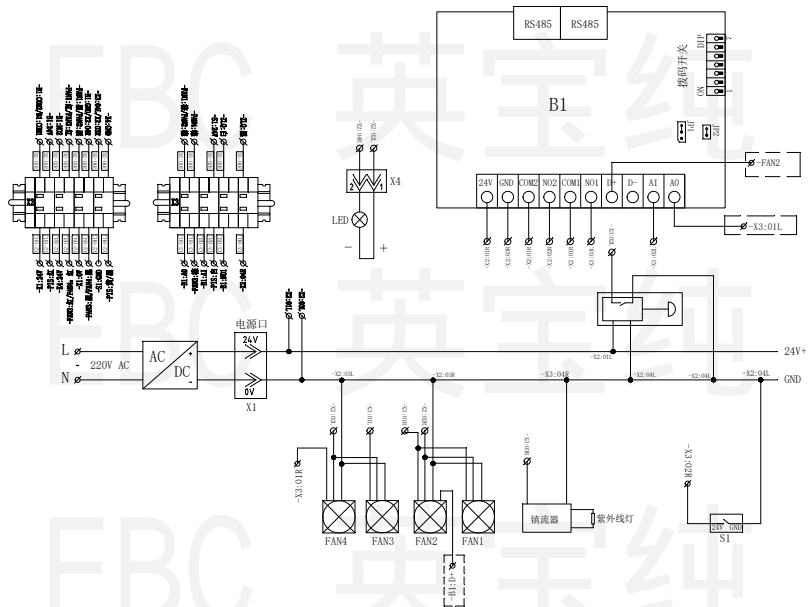
灯管为易碎玻璃制品, 请佩戴手套等防护后  
进行操作, 防止受伤;  
光触媒组件中的光触媒片不可拆卸。

## 4.4 常见故障及排除

现象	可能的原因	排除方法
整机不运行	电源松动	检查电源是否接触良好
	人体感应器不工作	重新启动整机
风口风量微弱	过滤器脏堵	更换新的过滤器，并且定期维护
	风机损坏	联系售后维修人员更换风机

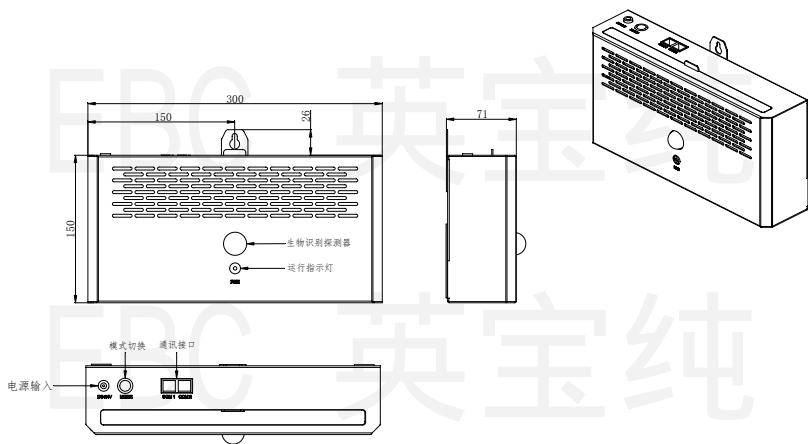
运行指示灯熄灭	电源松动	检查电源是否松动
	指示灯损坏	联系售后维修人员进行更换
过滤器异响	过滤器安装错误	检查过滤器安装方向是否正确
风机不转	风机损坏	联系售后维修人员更换风机

## 5. 电气原理图





## 6. 外形尺寸与接口说明



电源输入口：DC 24V

通讯接口：RS485 通讯

模式切换：智能运行和强制运行之间切换

运行指示灯：产品正常运行时显示绿色，故障或掉电时无灯亮

人体感应器：生物识别模块

EBC 英宝纯

EBC 英宝纯

EBC 英宝纯

## 7. 运行模式介绍

在消毒机工作运行的情况下，消毒机检测到电梯有人时，延时 **1s** 左右开启风机、紫外灯，进入消毒模式；在检测到人离开电梯时，延时 **30min** 关闭风机和紫外灯，进入待机状态。  
注意事项：红外感应水平方向有效感应距离为 **4m**，垂直方向有效感应距离为 **3m**。应避免使消毒机暴露在强光和强热源的环境，否则会影响消毒机的正常运行。

强制运行模式介绍：按下消毒机的强制运行开关按钮，可直接使消毒机进入消毒模式；关闭强制运行开关，消毒机延时 **30min** 关闭风机、紫外灯。

## 8. 条形码说明

形码上的对应生产日期以及序列号，如下图：



**M 0 1 9 0 5 8 0 0 0 2 0 0 2 0 5 0 1 0 0 0 1**

厂家定义

年 月 日 序列号

前 13 位(M019058000100)代表：厂家定义。

第 14~18 位(20501)数字代表：生产日期为 2020 年 5 月 01 日(A/B/C:10 月/11 月/12 月)。

最后 4 位(0001)代表：本批次的序列号。

## 9. 产品保证

1. 该产品的保修期为 12 个月。

2. 用户必须按照本手册中的安装指导来操作，才能获得厂商提供的产品质量保证服务。

以下任何原因造成的故障不属于我司的保修范围：

- 已超过保修期的；
- 不能提供产品出厂编号的；
- 由于在异常条件或环境中运行，或者用非本使用说明书中指定的不恰当安装方式安装、维护或操作导致的故障；
- 非本设备造成的故障，比如由用户的设备、用户的软件等造成的故障；
- 用户自行更换或拆装产品零部件造成损坏的，或由非授权维修服务者拆修而造成损坏的；
- 诸如火灾、地震、洪水等不可抗力而造成损坏的故障。

主要部件寿命：

紫外灯管: 6000 小时

风扇 : 70000 小时

**声明：**

版权所有，禁止任何未经授权的拷贝和抄袭。

厂家对产品持续升级进行的资料更改，恕不另行通知

EBC 英宝纯

EBC 英宝纯

EBC 英宝纯