

TRION[®]	Kitchen Odour Purifier
Installation, Operation and Maintenance Manual	Form No: 6D7W-CO2A-NA
	REV: A

Saber UV

Kitchen Odour Purifier



Caution

To ensure safe operation, please carefully read all the terms and precautions.

Safety Symbol Description

Warning

It indicates a potential danger, if cannot be eliminated, it will cause severe personal injury or even death.

Caution

It describes operating procedures, conventions, etc., or the parts need to be highlighted.

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About Model

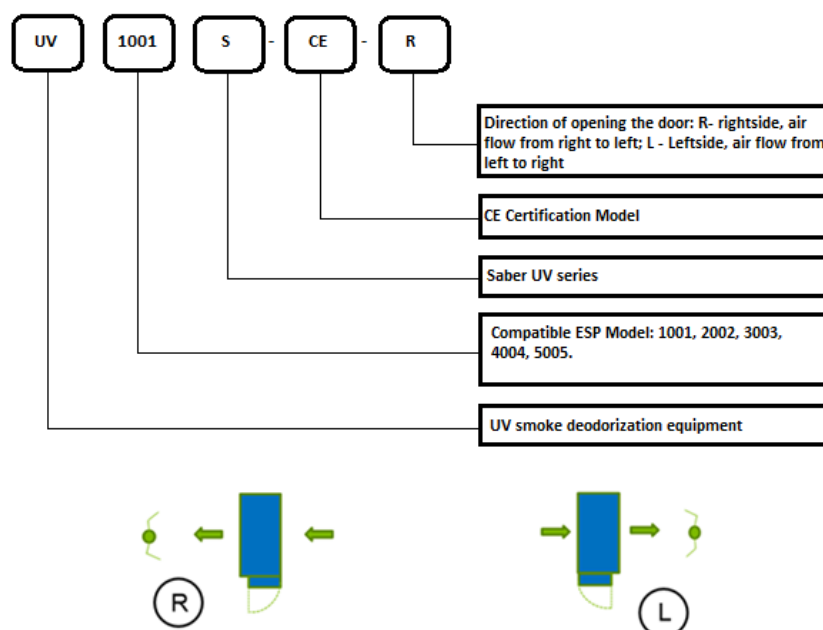
1.1 Foreword

The purpose of this manual is to enable users and maintenance personnel to understand and master the installation, operation and maintenance instructions recommended by the company for Saber UV kitchen odour purifier.

To ensure proper installation and use, you must select the right device and connect it to a properly designed and installed system. The project planning and piping layout must be in full compliance with local regulations and practices.

1.2 About Model

The company provides EN certified models with CE & UKCA marking, it has multiple variants of Saber UV kitchen odour purifier, and users can choose the right products based on their specific requirements for model, size, air volume, installation position, performance, and other aspects. The specific models are described as follows:



1.3 Scope of Application

Saber UV kitchen odour purifier is designed for the places where cooking oil fume is produced, including

hotel catering, commercial catering, food courts, and other types of dining establishments, to reduce odours from exhaust.

Used with kitchen fume purification products, Saber UV kitchen odor purifier is installed in the rear of the

AG series/AB series/standard T series/washable T series of electronic purifiers along the airflow direction.

Operational environment requirements: The ambient relative humidity should be 30-95%, and the ambient temperature should be -20℃ to +52℃.



Warning

The equipment should not be installed in a place where combustible and explosive gas exists.



Warning

This appliance should only be installed and maintained by a qualified technician. This appliance cannot be used by children and persons with reduced physical sensory or mental capabilities or lack of experience and knowledge if they have not been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

1.4 Operating Principle

As the core component of Saber UV kitchen odour purifier, the UV lamp generates 185nm wavelength of ultraviolet light when it is powered on.

Product Parameters

2.1 Technological Parameter List

/		UV1001S	UV2002S	UV3003S	UV4004S	UV5005S
Basic Parameters	Power Supply	220-240V/50Hz/1PH				
	Power (w)	65	150	220	300	365
	Lamp Quantity	2	2	4	4	6
	Load Current (A)	0.56	0.6	1.1	1.2	1.3
	Dimensions (L*W*H/mm)	615*330*534	1075*330*534	1536*330*534	1997*330*534	2458*330*534
	Weight (Kg)	30	38	50	65	78
Other Parameters	Security Profiles	Door opening power off protection (safety switch)				
	On-off State	ON-OFF power switch				
	Status Display	Operation and alarm indicator				
	Coordinated Operation	Air blower linkage function				

Note: The configuration and parameters of the leftward/rightward opening model are the same, only the opening direction for maintenance is different. For example, the opening direction for maintenance of the UV1001S-CE-L and UV1001S-CE-R models is leftward and rightward opening respectively.

2.2 Dimensions Diagram

The dimensions of Saber UV series products are shown in Figure 2 as follows:

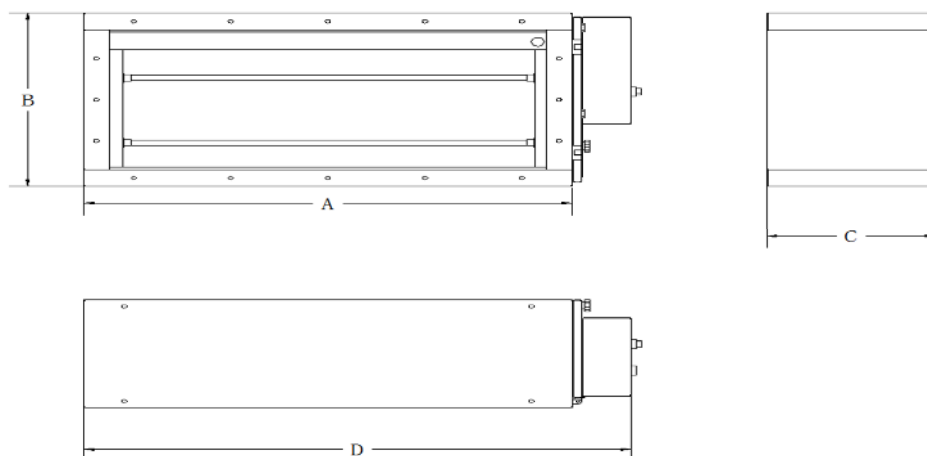


Figure 2 Dimensions diagram of Saber UV series products

Model	A	B	C	D
UV1001S	499	534	330	615
UV2002S	959	534	330	1075
UV3003S	1420	534	330	1536
UV4004S	1881	534	330	1997
UV5005S	2342	534	330	2458

Dimension unit: mm

Transportation and Installation

3.1 Transportation

- After packing, the product should not be bumped, tilted, crushed, or affected by rain or snow during transportation.
- The product should be stored in places that are clean, dry, free of fire hazard, well-ventilated, and without corrosive gases in the surrounding areas.
- When moving the product, handle them with care, to avoid internal filter elements from being damaged to compromise the performance.

3.3 Installation Requirements

Read the instructions carefully before installation, to ensure whether the product can meet the application requirements.

Caution

UV lamps are fragile, please protect them when installing and moving !

3.3.1 Connection Pipeline Design

When designing a pipeline, attention should be paid to reducing the duct resistance and designing the duct layout reasonably while obtaining the required air flow. To achieve the expected purification efficiency, ensure that the air flow through the equipment can be evenly distributed along the entire windward surface of the fume purifier.

3.2 Open-Box Inspection

After the product is received, check if the items in the box are damaged. Any damage found during transportation should be reported to the transportation service provider immediately. Check all the elements in the box. Items included in each purifier are as follows:

One purifier

One certificate

One manual

Because the velocity of the air of most ducts is significantly higher than those of soot purifiers such as Saber UV products, transition ducts must be used appropriately. If possible, a shrinkage ratio of 1:3 (approximately 20°) should be maintained, if there is a space limit, it can be achieved by using air valves, air dampers, or other methods. The connection between the pipe or fume purifier and Saber UV kitchen odour purifier should be sealed with gasket, rubber, or sealant.

To give full play to the purifying effect of the equipment, the length of the air duct must be ensured, so that the response time is no less than 2 seconds in the rear of the equipment along the airflow direction.

3.3.2 Cooperate with the Installation of Electrostatic Fume Purifier

Saber UV kitchen odour purifier provides leftward and rightward opening structure, as shown in Figure 3:



Top view of rightward model

Top view of leftward model

Figure 3 Schematic diagram of leftward & rightward opening model

Saber UV kitchen odour purifier is normally installed in the rear of the AG series/AB series/standard T series/washable T series of electronic purifiers along the airflow direction. To avoid the electronic control box interference when the maintenance of kitchen

odour purifier and fume purifier is performed, please select the same way to open the door with fume purifier hosts, that is, both are rightward opening models or both are leftward opening models, as shown in Figure 4 below:

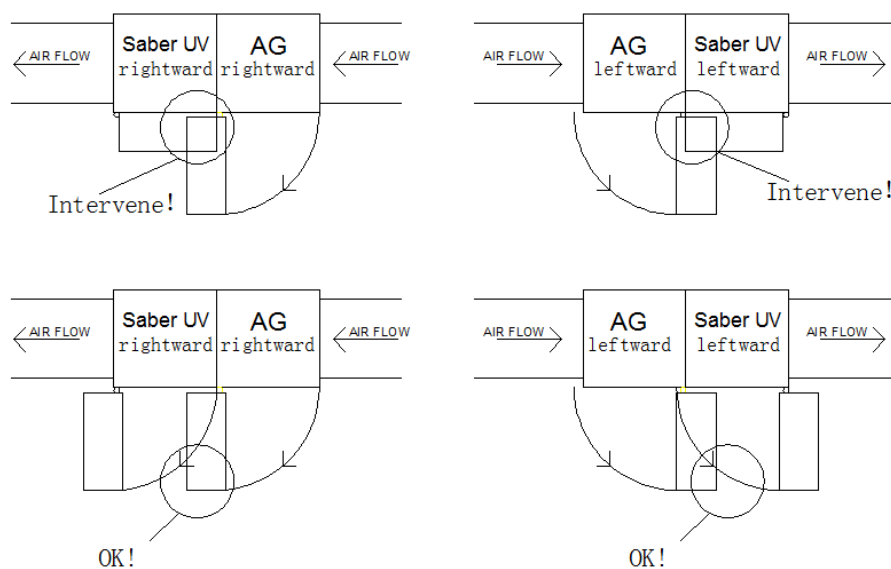


Figure 4 Combination with the fume purifier host

3.3.3 Equipment Lifting

Unwrap the packages, check whether the equipment is intact.

Rotate the door handle, open the access door, take out the lamp assembly and place it in the appropriate place.

The lamp assembly should be covered with appropriate materials to avoid dust pollution or deformation.

Secure a chain that can hold at least 250Kg on the beam of the ceiling.

A convex plate with a tooling hole is installed on the

four corners of the upper and lower sides of the equipment, and 4 holes with a diameter of 10mm are drilled based on the position of the mounting hole to fix the eyebolt.

The eyebolt of the M10 (or larger size) are loaded into each hole and secured with nuts and gaskets. Pay attention to the sealant before loading the bolt to ensure that the hole site is sealed after installation.

Caution

Ensure that each eyebolt is fitted with 2 nuts to form an interlocking state. If only 1 nut is installed, the bolt will become loose, and the device may fall down!

Connect the equipment and the chain with a connecting buckle and attach the chain diagonally to the floral nut.

Caution

After straightening the device, lock the floral nut to ensure that it will not rotate or become loose, otherwise it will cause the device to fall!

Connect the flange of the equipment with the connecting pipe.

After installation, put the light assembly back in place and make electrical wiring.

Caution

Due to the large volume and weight of the equipment after stacking, unless the single machine is used alone, we do not recommend the hoisting installation. A safe and reliable hanger must be designed if multiple overlays are superimposed and installed in a hoisting manner.

3.3.4 Platform Installation

To facilitate installation and connection between equipment and connecting pipe, before installation, rotate the door handle, open the access door, take out the lamp assembly, place it in the appropriate place and make good protection.

After connecting the pipe to the equipment, put the light assemble back in place and make electrical wiring.

3.3.4.1 Overlay Installation

When stacked on top of each other, select one of the devices as the bottom device of the whole stack combination, then stack other devices successively until the desired height and number of layers.

Connect the stacked equipment with M10 bolts, flat gasket, spring washers and nuts. First, punch the reserved $\Phi 10$ convex plates at the four angles of the top and bottom of the case with a tool (except the $\Phi 10$ convex plates at the top of the four corners on the top layer of the machine). Remove scrap iron and other sundries caused by punching. Connect the stacked machine with M10 screw (Before the screw is inserted, seal the screw with sealant to ensure that the hole is sealed after the connection is fixed.), flat gasket, spring washer and nut. When connecting, please use the attached gasket between the chassis, as shown in Figure 5 and Figure 6 below: The installation platform and equipment are connected and secured by the bolts. When the installed equipment exceeds 3 layers, its high center of gravity requires the use of other augmentation devices to ensure support safety.

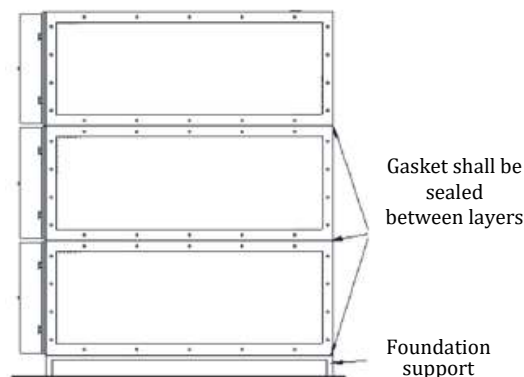
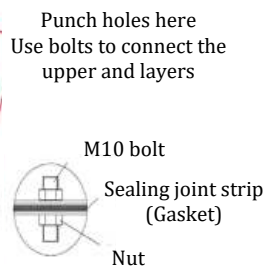
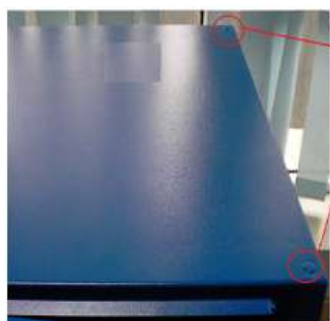


Figure 5 Overlay installation drilling and connection diagram

Figure 6 Three-layer stacking installation diagram

3.3.4.2 Installation Accessories

Optional Installation Accessories Kit		UV1001S	UV2002S	UV3003S	UV4004S	UV5005S	单位 Unit
Overlay Accessories Kit	Poly Bag	1	1	1	1	1	PCS
	CR Gasket	2.5	3	4	5	6	M
	Triplicate Form	1	1	1	1	1	PCS
	Threaded Rod M10X100	4	4	4	4	4	PCS
	Hexagon Nut M10	8	8	8	8	8	PCS
	Flat Washer 10	8	8	8	8	8	PCS
	Spring Washer 10	8	8	8	8	8	PCS

Caution

The accessory kit is not a standard configuration. Please contact the after-sales service department after the device stacking scheme is determined, to ensure that the required accessory kit can be configured correctly.

3.3.5 Maintenance Space Reservation

To ensure that there is sufficient space for maintenance after the equipment is installed, please ensure that it can meet the following requirements:

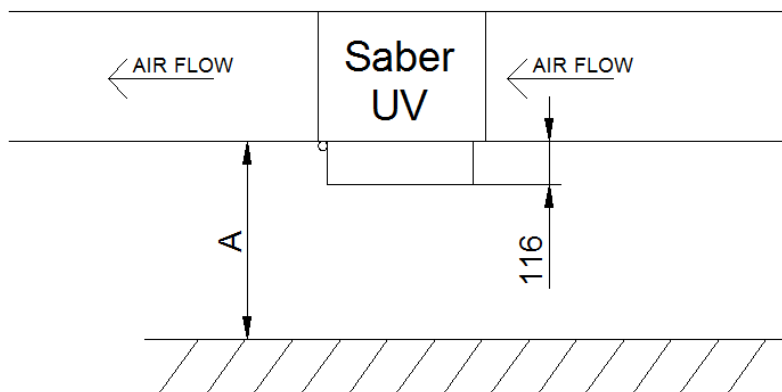


Figure 7 Maintenance space diagram

In Figure 7, the size requirements of A are as shown in the following table:

NO.	Product Model	Maintenance Space A (mm)
1	UV1001S	≥500mm
2	UV2002S-UV5005S	≥1,000mm

Caution

The UV lamps are consumables, which must be replaced regularly. Please make sure that the equipment installation space meets the requirements as shown in Figure 7 above, otherwise the UV lamp cannot be replaced.

3.3.6 Electrical Installation

3.3.6.1 Safety Precautions

Caution:

- The equipment must be securely grounded. Do not connect its grounding wire to the grounding wires of fuel gas piping, water pipe, lightning conductor, or telephone. Improper grounding may cause electric shock.

- Electric connections must be strictly made according to the electrical wiring diagram, to ensure that the wiring is correct, and the connection is secure.



Warning

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.

Warning:

- Electrical wiring must be done by professionals. Faulty wiring may result in equipment damage or even electric shock injuries.
- When the user distributes power to the equipment, the breaker with leakage protection function should be installed.
- Do not twist or pull the wire in the control cabinet to prevent loose wiring and control failure. Do not wipe the controller or control element with benzene, diluent, or chemical reagent, otherwise, the surface of the control element may become discolored or faulty. To remove dirt, first, soak the dry cloth in water containing a neutral detergent, squeeze the water out and wipe it off, then wipe the controller or control element with the dry cloth.

3.3.6.2 Electrical Wiring

The external power must be turned off before wiring, and electrical wiring operation is prohibited when the power is turned on.

Please ensure that the provided power supply voltage and frequency are consistent with the values indicated in the equipment label.

The user should conduct the electrical wiring work according to the electrical wiring diagram of the equipment, which is attached in the manual and the equipment control cabinet. Please refer to the electrical wiring diagram for proper operation.

The power supply of the equipment should be provided with circuit breakers with the leakage protection function. Type C circuit breakers with rated

current of 6A or higher are recommended.

The power line of the equipment should be copper core cable with the wire diameter no less than 1 mm².

If the wiring distance is longer, the cable diameter should be appropriately improved.

Electrical systems should be implemented according to related local laws. Please use the dedicated lines.

3.3.6.3 Inspections after Installation

Check whether all electrical wiring is consistent with the requirements of electrical wiring diagram, whether the terminal connection is secure, and the grounding of the equipment is reliable.

Check whether the electrical components and the aviation connector in the equipment are intact, without looseness or damage.

Check whether the leakage protector of the equipment's power distribution system can operate normally.

After the above inspection, close the control cabinet door and the access door of the equipment, and ensure that the access door handle is screwed as required.

3.3.6.4 System Startup Inspection

After installation, ensure that the equipment can be started up normally by checking the following contents:

Switch on the power supply, the equipment should start working when the power switch on the control cabinet panel of the equipment is switched from "OFF" to "ON". The UV lamp should work normally when the switch indicator is on.

If there is any abnormal phenomena, please troubleshoot based on the method described in Chapter 4, or contact the after-sales service department.

Care and Maintenance



Warning

Ensure power supply is cut-off before starting the maintenance or cleaning work. Main Switch shall be off before opening the control panel door.

4.1 Instruction

- Appliances that contains a **UV Lamp**.
- Unintended use of the appliance or damage to the housing may result in the escape of dangerous radiation. Radiation, even in small quantities may cause harm to the eyes, skin and appliances.
- Appliance that are obviously damaged must not be operated.
- Read the maintenance instruction before opening the appliance.
- The appliance must be disconnected from the supply before replacing the **UV Lamp**.

4.2 Fault Analysis

Faults and Symptoms	Cause Analysis	Solution
The green indicator is off.	Input power is off.	Check whether the input power switch at the customer side is on.
	The cable is loose.	Check the cable from the power at the customer side to the product is well connected.
	The cable is faulty.	Check whether the input power is correctly connected on the electric control box.
	The knob switch is faulty.	Replace the knob switch
The red indicator is on.	The access door is not closed properly.	Close the access door and tighten the handle.
	The safety switch is not closed.	Check whether the safety switch is closed.
	The safety switch is faulty.	Replace the safety switch.
	The relay is faulty.	Replace the relay.
The purification effect is poor.	The UV lamp reaches the service life.	Replace the UV lamp.
	UV Lamp is damaged.	

If the problem cannot be identified or corrected, please contact the after-sales service department!

4.3 Replacement and Maintenance of the UV lamp

The UV lamp is a consumable item. After reaching the service life, it should be replaced based on the following steps:

1. Turn the control switch to "OFF" and cut off the power supply of the equipment.
2. Open the access door, remove the baffle for fixing the lamp assembly, unscrew the aviation plug of the lamp assembly power supply, and take out the UV lamp assemble along the slide rail.
3. Remove the cover plate on the lamp assembly and take out the tube for replacement.
4. After the replacement, put the lamp assembly inside the cabinet along the slide rail, put the baffle which is used to fix the lamp assembly back to the original place, and install it securely.
5. Close the access door and tighten the manual bolts.
6. Reconnect the external power to the equipment and turn the main power switch from "OFF" to "ON".

Caution

UV3003S and above models have multiple lamp assemblies, and the power supply between the lamp assembly is connected through the aviation plug. When disassembling the lamp assembly, pay attention to unscrewing the aviation plug first and then take out the lamp assembly. When putting back the lamp assembly, please do not forget to re-plug, and tighten the aviation plug.

Product Structure Diagram

Product structure of UV3003-CE-R shown in Figure 8 is for reference only. Qty of components may vary based on the size selected.

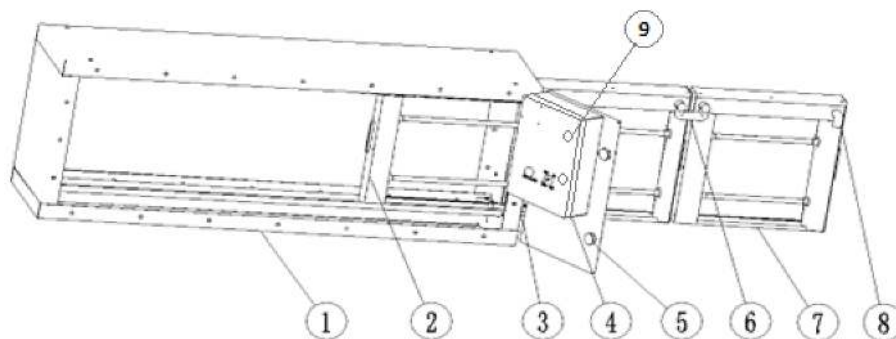


Figure 8 Product Structure

NO.	Description	Quantity (PCS)
1	Chassis Components	1
2	Lamp Assembly Components (Large)	1
3	Hinge	2
4	Electric Cabinet Components	1
5	Hand Bolt	2
6	Lamp Assembly Wire Harness Transfer Parts	1
7	Lamp Assembly Components (Small)	1
8	Lamp Assembly Power Cord Components	1
9	Door Lock	2

5.1 Spare Parts List

NO.	Description	SAP
1	Ballast	6415145
2	UV Lamp-357mm (Export model)	5604052
3	UV Lamp-843 mm (Export model)	5604041
4	UV Lamp-356mm (Localized model)	6253625
5	UV Lamp-846mm (Localized model)	6253626
6	UV Lamp Holder	5603022
7	Indicating Lamp	837257
8	Knob Switch	5247791
9	Relay	5247789
10	Relay Holder	5247790
11	Fuse Holder	5247851
12	Fuse 4A	5247850

The electrical wiring diagram of the complete machine is as shown in Figure 9 below:

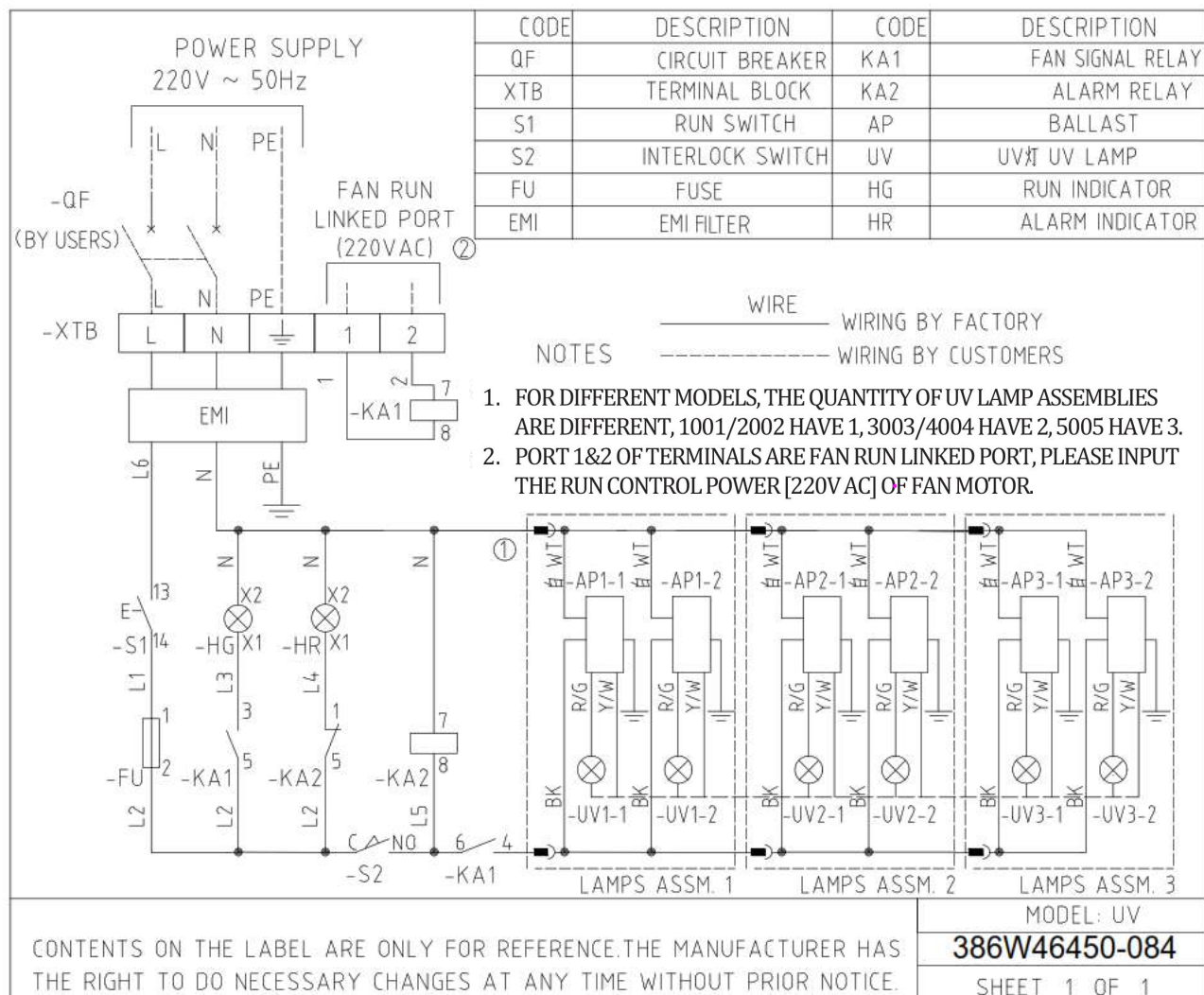
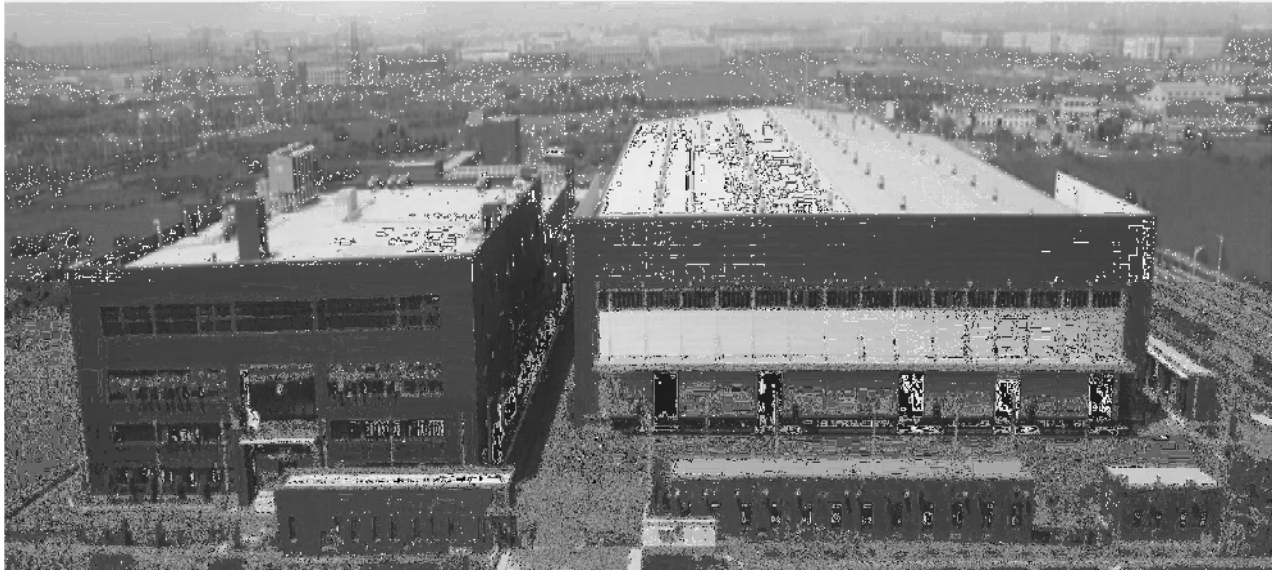


Figure 9 Electrical wiring diagram.



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* Johnson Controls reserves the right to change product designs without prior notice.

** The specific product performance is agreed by the parties in the contract. This manual is for reference only.

*** Thank you for using our products. If you have any questions, please call our service at any time: 400-928-1022.



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