GEBC®

Green Energy Building Controls

GEBC®
Network Lighting Control APP
Instruction Manual

GEBC®

USER MANUAL

TABLE OF CONTENTS

GEBC®

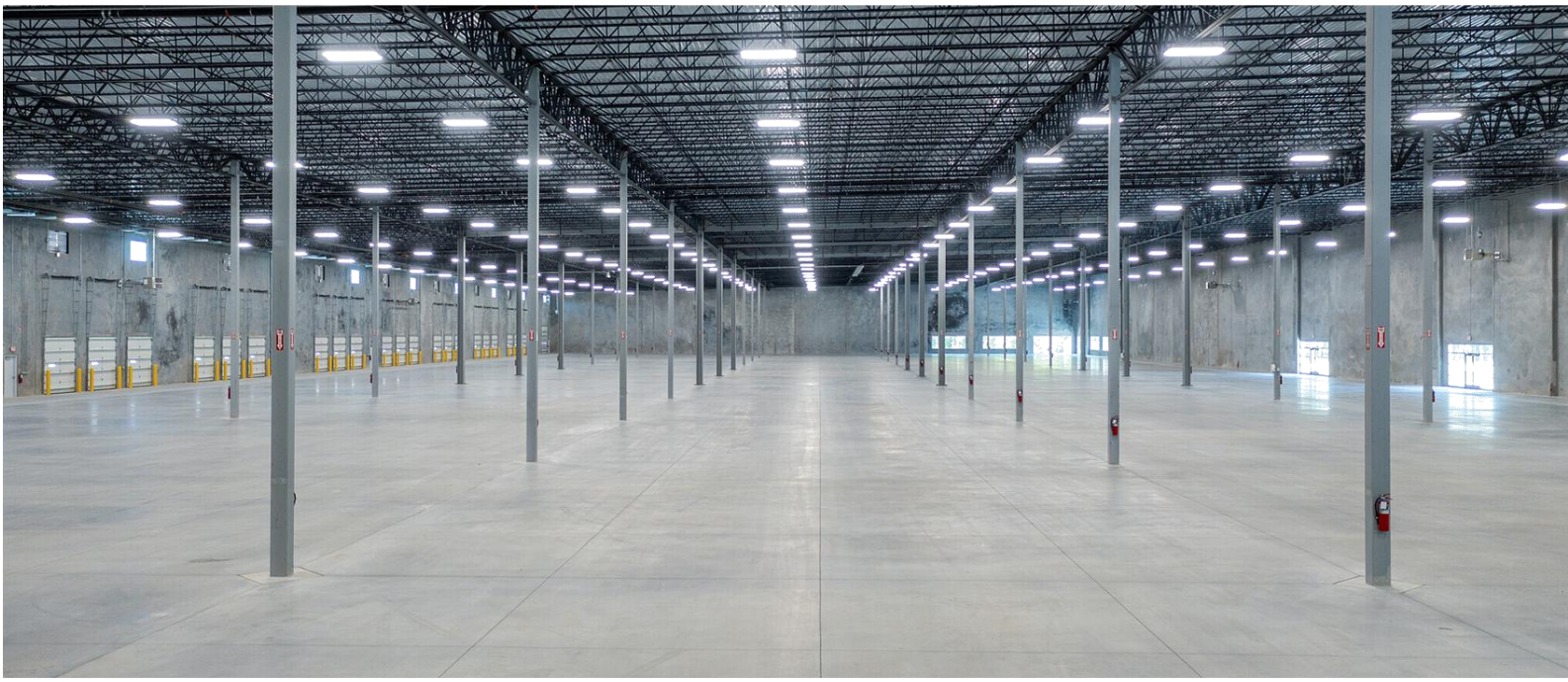
USER MANUAL

1.Introduction

GEBC® Network Lighting Controls (NLC) can address luminaires individually or in groups, utilizing Bluetooth® Low Energy Mesh 4.2 & 5.0 protocols. This state-of-the-art wireless control system is operated using the GEBC NLC APP in conjunction with various sensors, wall switches, power packs, and controller nodes. The system components are easily commissioned using the GEBC NLC APP on a mobile device, without requiring a gateway. The mesh network enables wireless communication up to 100 feet or more between devices, and commissioning does not require any internet access.

The GEBC NLC APP employs data encryption to ensure mesh network security. The configuration settings for each device are stored in encrypted QR codes and each network device cannot be accessed without the QR code. Homewell INC receive UL 1376 verification for security capabilities, and achieve full-stack, in-house R&D for networked sensors and controllers. The GEBC platform is also one of the systems listed to DLC's Networked Lighting Controls (NLC5).

Luminaire level lighting control refers to a type of lighting control system where each individual light fixture is equipped with its own control device or integrated control system, allowing for independent control and management of each fixture. LLLC luminaires can detect human movements, ambient light level, and automatically turn on/off or dim the lights to provide comfort, safety, and energy savings.



USER MANUAL

2. Caution

1. Do not use more than one mobile device during the commissioning process.

• Using multiple mobile devices may cause unexpected results such as data corruption, duplicate light addresses, etc.

2. Ensure commissioning data has been synchronized to the cloud before sharing QR code.

Access rights to the zone can be shared to other users by sharing the QR code. Before sharing the QR code, please make sure the zone data has been uploaded to the cloud (requires internet connection).

When uploading/downloading the data, it must have a good internet connection to save/update the commissioning data to the corresponding QR code. You may share the QR code to other users immediately after commissioning is completed.
DO NOT share the QR code to others before you successfully sync the data

3. Before adding the sensors, better to have a plan for the project.

When adding devices, it is suggested to adding the nearest 5-10pcs devices via engineering adding mode. Then name the devices accordingly via positioning function. It will be much easier and quicker to add all devices you need.

4. Save and Name the Zone QR code to the project file on your computer.

3. Preparation

3.1 Download the App

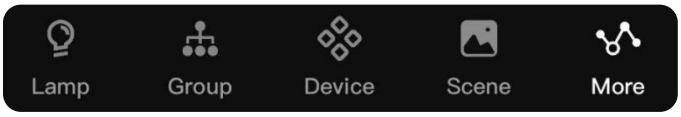
To download the GEBC APP, scan the QR code below.

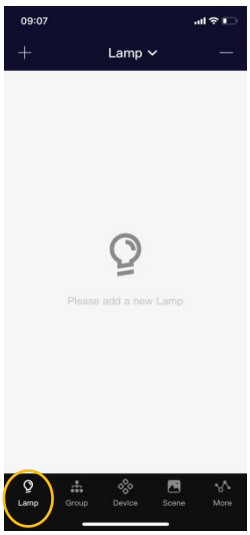
IOS

Google Play Store

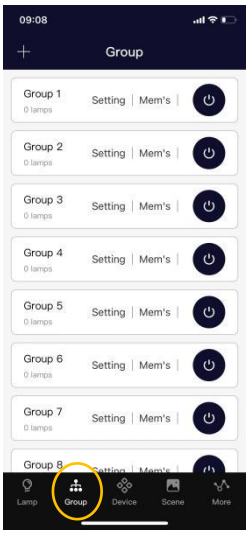
3.2 APP Navigation

GEBC APP has five tab pages which you can move between to provide easy control of your lights. They are located in the bottom menu bar of the screen.

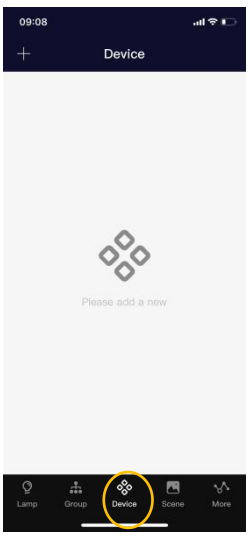




"Lamp"shows all fixture sensors that are connected to the app. It allows the user to view and control individual lights.

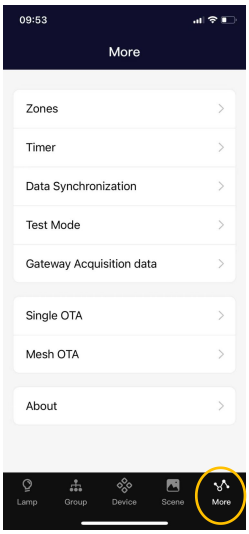


"Groups" allows users to set para-meters of the devices at the same time. There are 16 groups per Zone.



"Device" shows all the gateways, switches and other GEBC BLE devices(except the sensors) that are connected to the app.

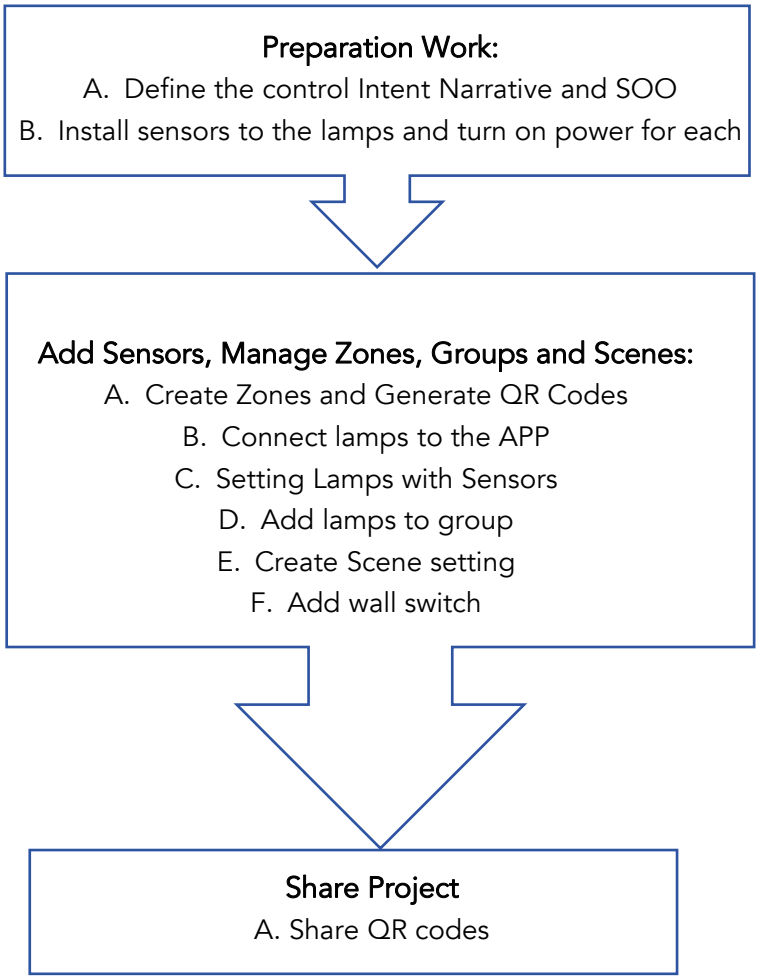
"Scene" allows users to mange the scene according to their needs. There are 16 scenes per Zone.



"More" allows the user to view Zones, Timer and to connect to the WiFi and upload and download the data.

4.Commissioning

The following commissioning procedure is recommended:



4.1 Preparation Work

For each project site, it is recommended to prepare a design script in advance, which includes the following content:

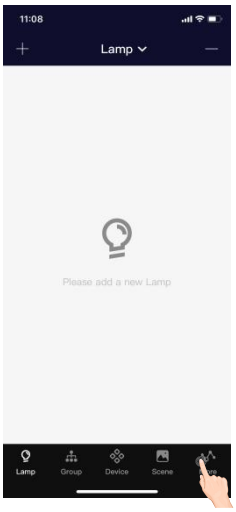
1. Site plan, description of the actual functional purposes of each area;
2. Model No., quantity, parameters, and location description of lamps;
3. The division of zones is recommended based on real functional purposes, and the real number of lamps and switches in a single zone should not exceed 100. There should be no objects (such as solid walls, large metal objects, etc.) that hinder wireless signal transmission in the area, and the length, width, and area should not exceed the wireless coverage range (usually the length, width, and area of the building should not exceed 50 meters, and the area should not exceed 1000 square meters);
4. For each zone, plan the number and name of groups needed, the number and name of lamps scenes, and the approximate lamps scheme for each scene;
5. Plan the number and model of devices required for each zone

4.2 Create Zones, Add Sensors, Manage Groups and Scenes

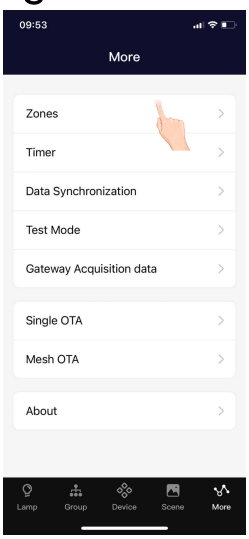
4.2.1 Zones

It is recommended to create QR codes for all zones and pre-define all groups, scenes, and their names prior to commissioning in order to reduce work on site. A QR code represents a zone and all of the lights, switches, and other devices in that zone. For more information on scanning, creating, and sharing QR Codes, see the QR Code chapter, on page 18.

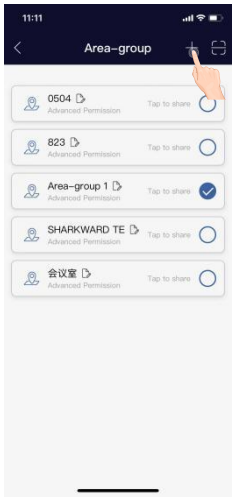
4.2.1.1 Creating Zones



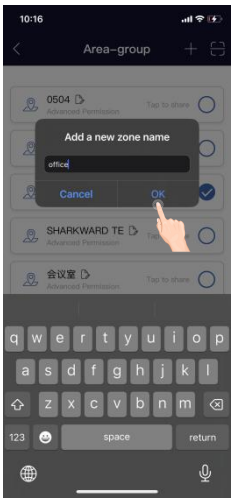
1. Open GEBC APP, Click"More"



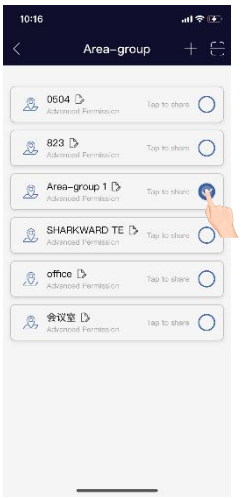
2. Click"Zones"



3. Click"+" Create new zones



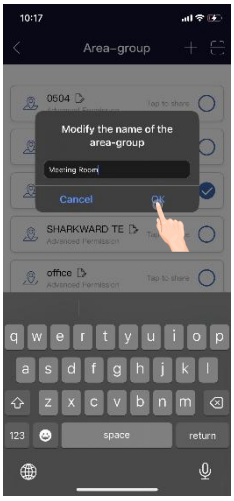
4. Type the name , and click "ok"

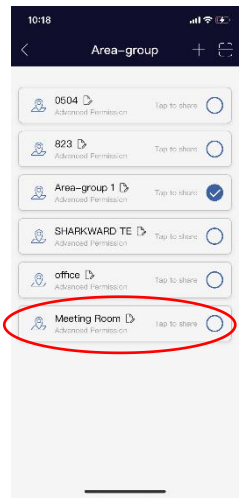


5. All zones can be found in the " Zones" list and you can tap to share and and you can switch between them by clicking the circle on them.

4.2.1.2 Rename Zones

①

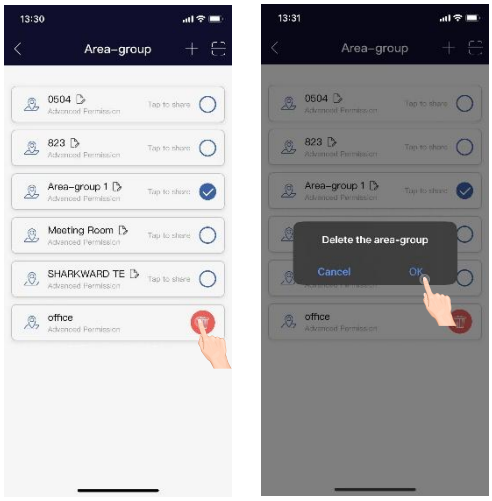




②&③

1. On the "Zones" page, press the edit button located to the right of the zone name.
2. Enter preferred zone,name as prompted.
3. Press "OK" to save.

4.2.1.3 Deleting Zones



1. Select the Zone to delete and long press the zone and the delete button will appear on the right.
2. Press the red delete button that appears.
3. Confirm by pressing **"ok"**

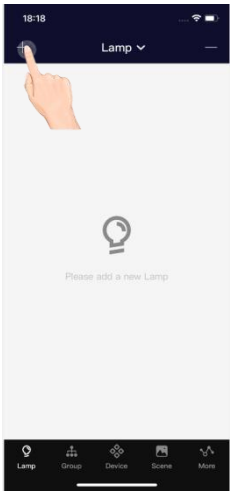
Note: User cannot delete the zone in which they are currently active.

4.2.2 Lamps

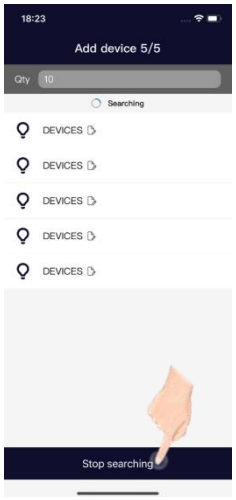
The Lights page is the first page you'll see upon opening the APP. It is the primary page for controlling individual lights. Add lights by zone, and do not turn on more than 100 lights at the same time. To prevent wireless communication jamming, turn off lights that are not in the current zone. We have two ways of adding, Engineering Add Mode and Quick Add Mode.

4.2.2.1 Add lamps to the APP

A. Engineering Add Mode

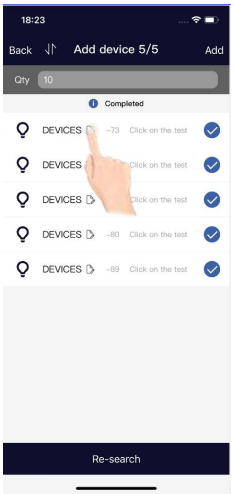


1.Enter the **"Lamp"** interface , click the **"+"** in the upper left corner



2. The app will scan and list nearby lamps that can be added (the default quantity is 10). Click **"Stop searching"**, and the nearest 10 devices will be sorted based on the Bluetooth dB value

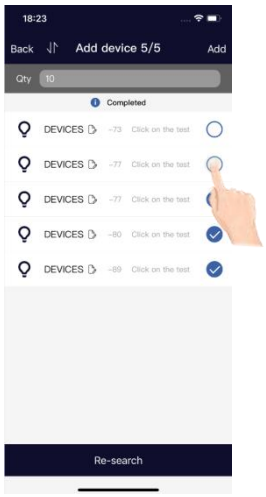
3. Click the lamp to switch it on and off for easy search and positioning.



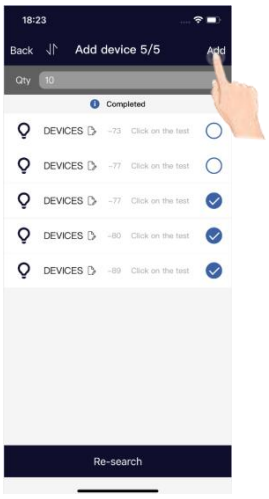
4. Click  to rename the lamp

5. Type the name , and click **"ok"**

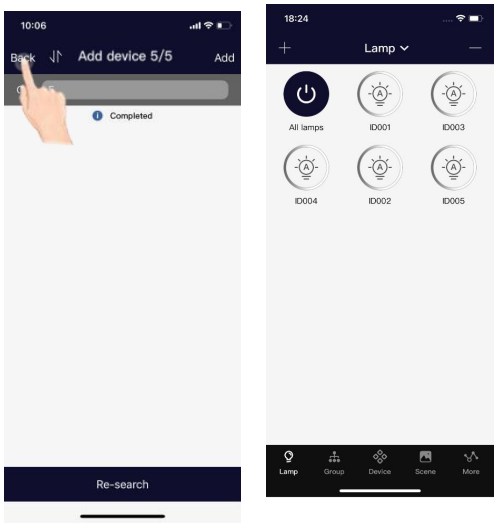
USER MANUAL



6. Click the checkbox to select or deselect the lamp.



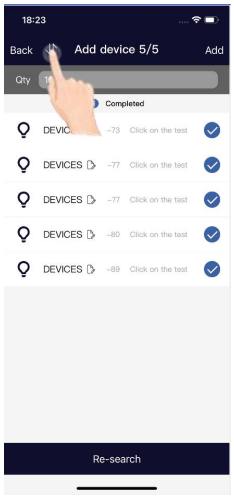
7. Click the **"Add"** button in the upper right corner, add the selected lamps to the project

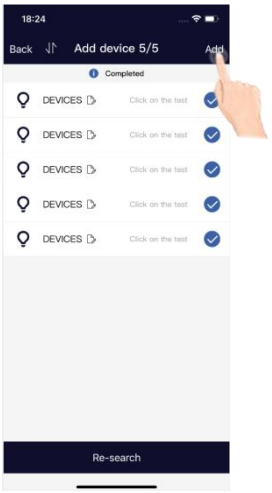


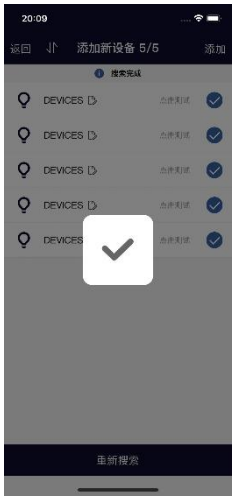
8. After adding successfully, you can click "Back" to the "Lamp" interface to check whether the devices are added successfully

Tips: For large areas, it is recommended to use the engineering add mode. After positioning each light, change the name before adding it.

B. Quick Add Mode



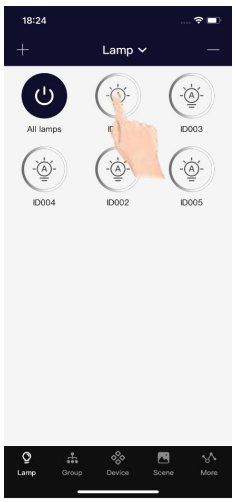




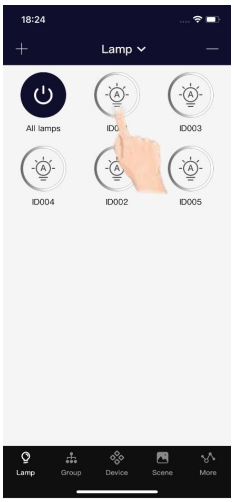
1. Click  on the top left corner will switch to **Quick Add mode.** In this mode, the Bluetooth signal dB value will no longer be displayed. Click **"Re-search"** will search for all Bluetooth lamps in the zone (up to 100)

Click **"Add"** to quickly add all devices in the list

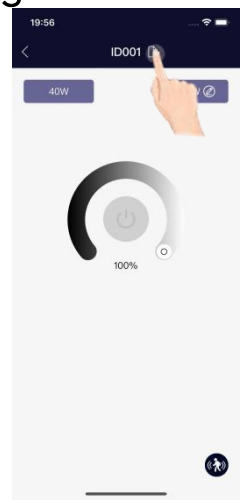
4.2.2.2 To Name or Rename Lights



1. On the lamp interface, click one lamp can be quickly turned on and off for easy search and positioning

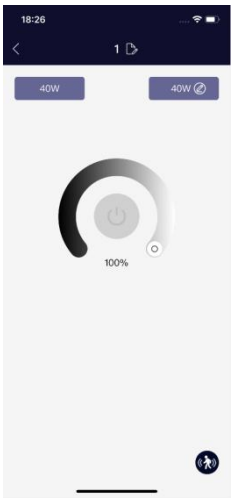


2. Long press a lamp, it will enter into the dimming and manage interface



3. Click to name the lamp

4. Type the lamp name in the pop-up input box and click "OK" to save it

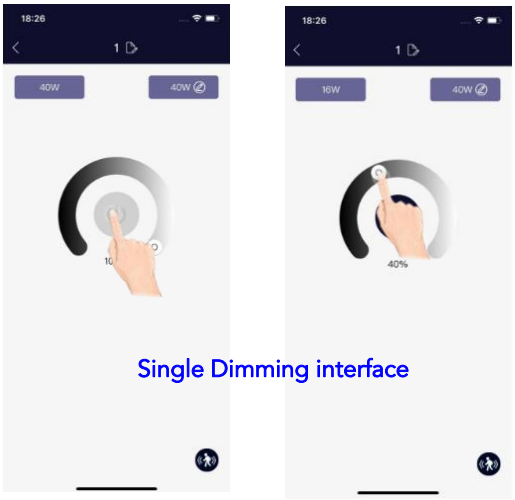


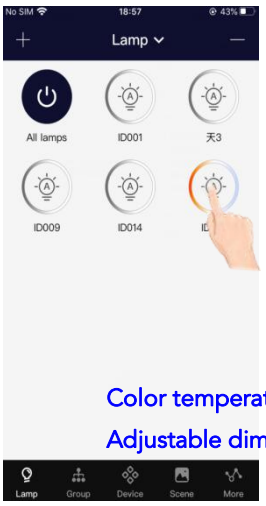
5. The lamp name has been successfully re-named

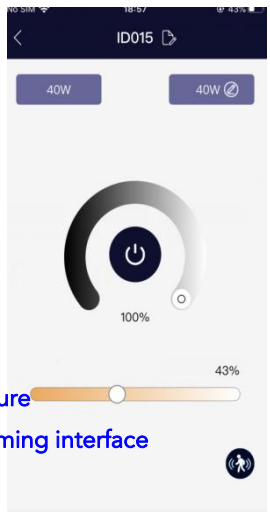
4.2.2.3 Dimming and Color Tuning

Below are examples of the Light Dimming pages for mono-dimmable, CCT Dimming..

1. Long press a lamp to enter the dimming and management interface

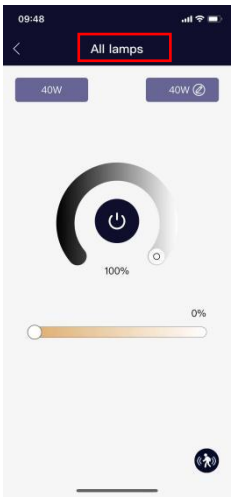


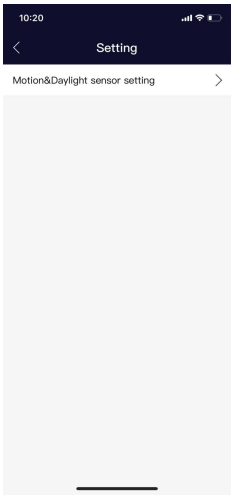


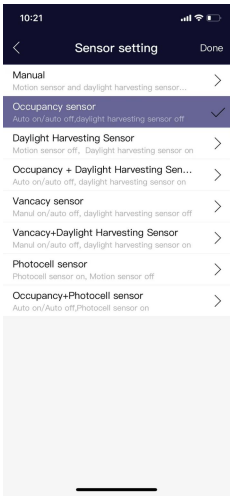


2. Different types of lamps will have different dimming interfaces. Please click and slide the corresponding dimming control.

4.2.2.4 Quick setting for all Devices



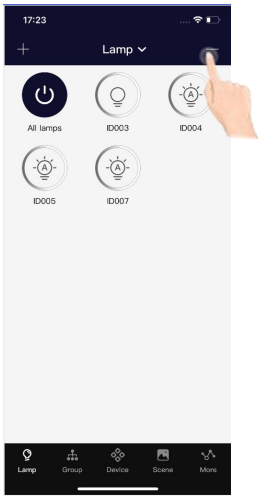


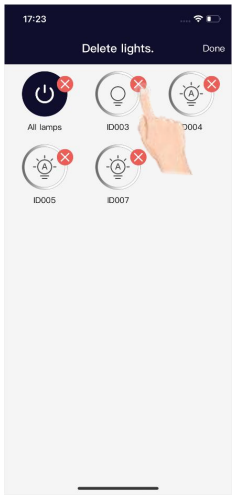


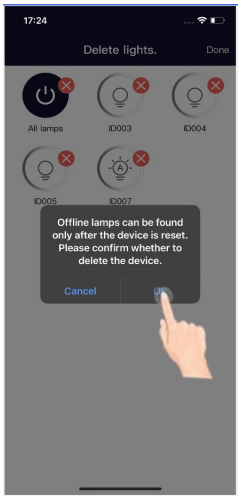
1. Long press at "ALL lamps"to enter the dimming and management interface

2.Here you can set the parameters of all devices you added.

4.2.2.5 To Delete Lights







1. Click"—"on Lamp interface

2. Click  to delete the lamps

3. This method is only effective for online lamps

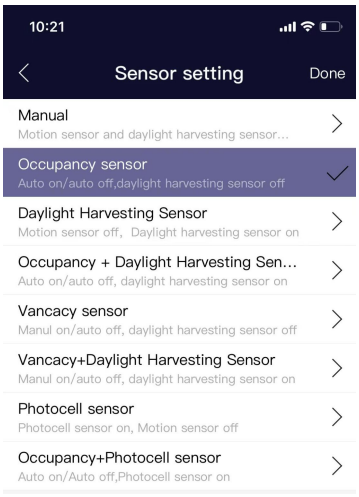
4.2.2.6 Sensor Settings

4.2.2.6.1 Brief introduction

For lamps with sensors, the sensors can automatically sense human body movements and environmental light changes, and automatically switch on and off the lights and adjust the brightness according to needs, achieving the goals of comfort, health, and energy conservation.

Before setting the sensor parameters, you need to select the sensor mode according to your needs:

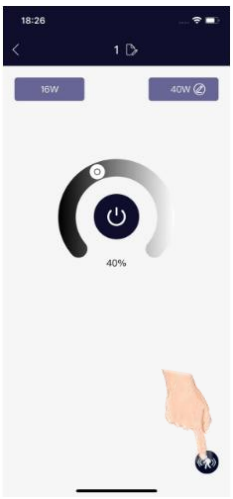
USER MANUAL

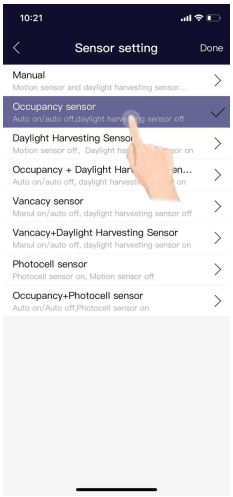


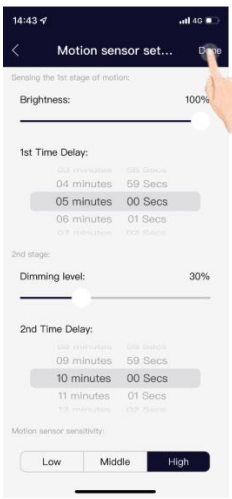
Mode 1: Manual (Motion sensor and daylight harvesting sensor all off)
Mode 2: Occupancy sensor (Auto on/auto off, daylight harvesting sensor off)
Mode 3: Daylight harvesting sensor (Motion sensor off ,Daylight sensor on)
Mode 4: Occupancy +Daylight Harvesting sensor(Auto on/auto off, daylight harvesting sensor on)
Mode 5: Vancacy sensor(Manual on/auto off, daylight harvesting sensor off)
Mode 6: Vancacy +Daylight Harvesting Sensor(Manual on/auto off, daylight harvesting sensor on)
Mode 7: Photocell Sensor(Photocell Sensor on, Motion Sensor off)
Mode 8: Occupancy +Photocell Sensor(Auto on/Auto off, photocell Sensor on)

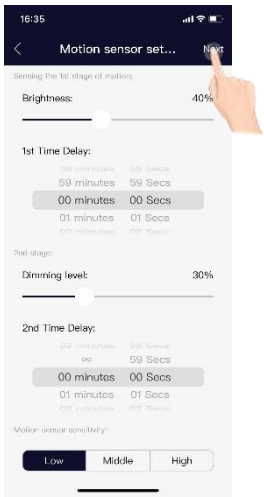
Lamps with sensors have some special parameters, including:
1. Brightness: The brightness of the lamp when the motion is detected
2. 1st Time Delay: Hold time refers to the time it takes for the sensor to turn off after receiving the signal for the last time
3. 2nd Time Delay: Stand-by time refers to the duration of the dimming function after the lamp enters the dimming function
4. Dimming level: The function of dimming a lamp, reduce the brightness to 10%, 20%, and 30% to achieve energy-saving
5. Motion Sensor Sensitivity: Sensing distance (sensitivity) refers to the distance that the sensor can receive signals, with three options: high, middle, and low
6. Linkage: When the lamp is not triggered by motion, but other lamps in the same group sense movement and turn on the linkage setting of this group, the other lamp will be triggered to the linkage brightness. The linkage brightness is calculated in proportion to the normal working brightness.

Sensor setting









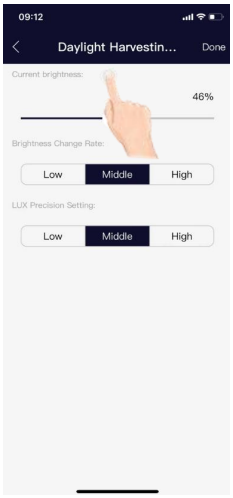
1. Click the  in the lower right corner to set the sensor parameters for this lamp

2. Select the sensor mode type

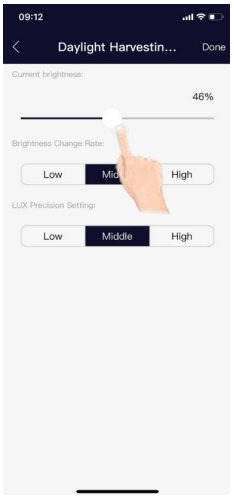
3. After setting the parameters, you need to click the **"Done"** button to save the settings.

4. If select the daylight harvesting mode, after setting the sensor parameters, click **'Next'** to enter this mode

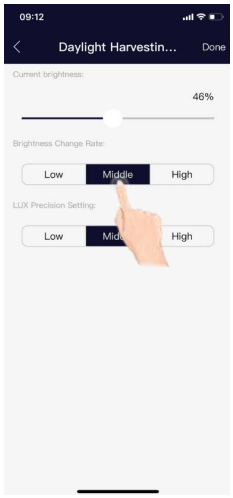
4.2.2.6.2 Sensor daylight harvesting setting



5. Choose the current brightness of the lamp as the memory lux value for daylight harvesting function. When the ambient light turn lower, the brightness of the lamp will increase. When the ambient light turn higher, the brightness of the lamp will decrease to maintain the lux level



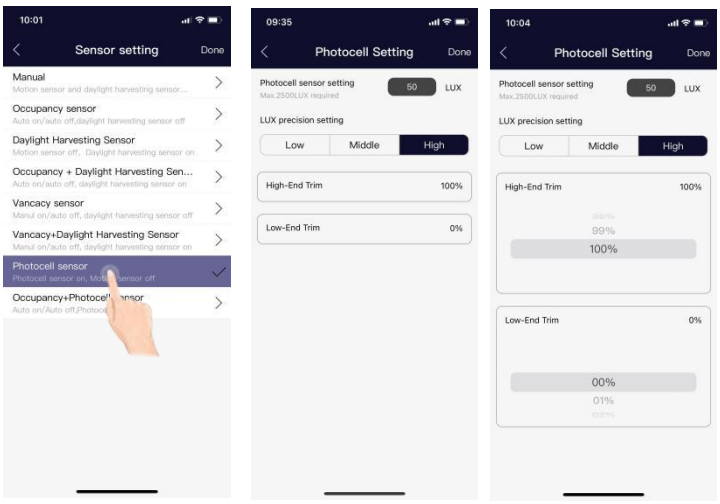
6.Brightness Change rate means when the ambient light changes, the speed at which the luminance of the luminaire changes can be changed. There are three types : "Low", "Middle", and "High" modes



7. LUX Precision Setting means you can select the accuracy of lux recognition when daylight harvesting is working.There are three types : "Low", "Middle", and "High" modes

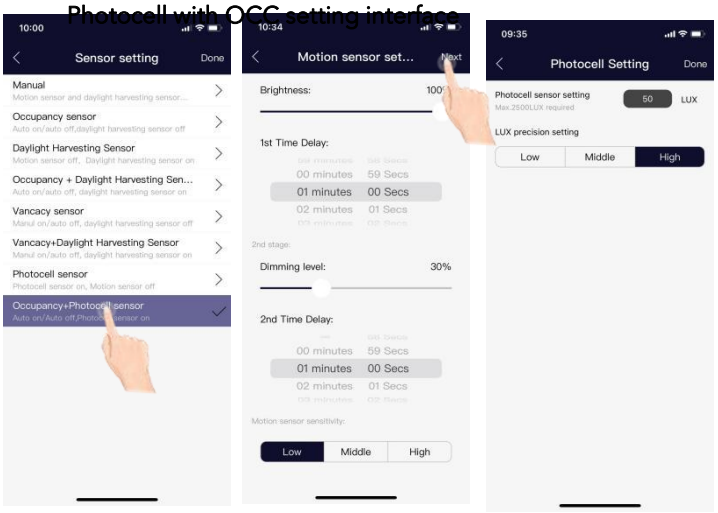
4.2.2.6.3 Sensor outdoor photocell sensor

Photocell only setting interface



In photocell interface, you can set the lux and choose the lux precision (low,middle, high), High end trim, low end trim.
Low means 15%, Middle means 10%, High means 5%
Take the setting on the picture as an example, when you set 50lux, it means when the lux is less than 47lux, the fixture will be 100% on automatically, when the lux is 53lux, the fixture will be off.

Photocell with OCC setting interface

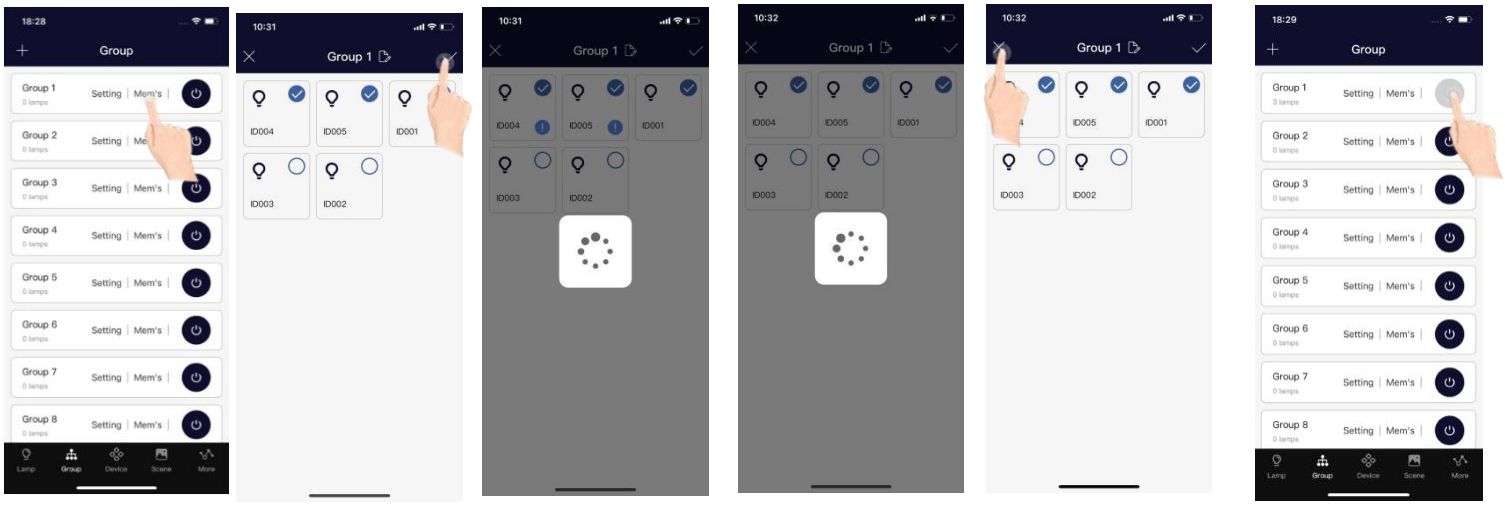


In photocell with OCC mode, after setting the sensor regular parameters, click"Next", then you can set the lux and Lux precision.
Take the setting on the picture as an example, when the lux is less than 47lux, when detect motion, the fixture will be 100% on, after 1 minute, there's no motion detected, the fixture will be 30% on, then after 1 minute without motion detected, the sensor will be off. During the 1st time Delay and 2nd time delay, once the lux is more than 53lux, the fixture will be turned off by force.

4.2.3 Groups

Groups enable control of a defined set of lights, in a small area. There are totally 16 groups in the list.

4.2.3.1 Add or remove lamps in a group

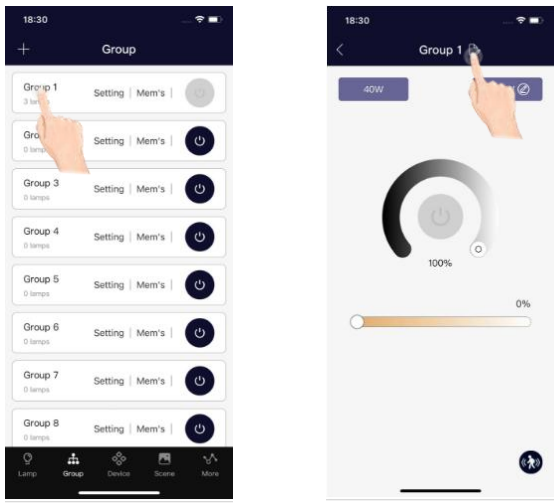


In member management, click the selection box in the right corner of the lamp icon to add or remove a certain lamp. After selecting members, click the " √ " to save the grouping

During adding, ! will appear in the lower right corner of the device being configured. The devices that are added to the group successfully, the ! will disappear. Then press X to exit

On the "Group" interface of the APP, click the sliding switch of a certain group to quickly turn on/off all the lamps in this group

4.2.3.2 Rename the group



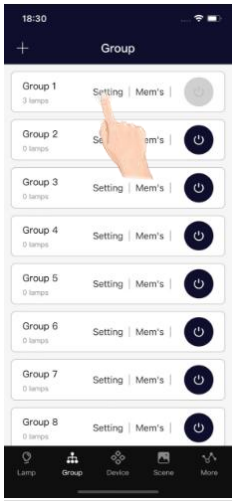
1. Click "Group1" to enter the group lamp dimming and management interface

2. Click  to name the group.

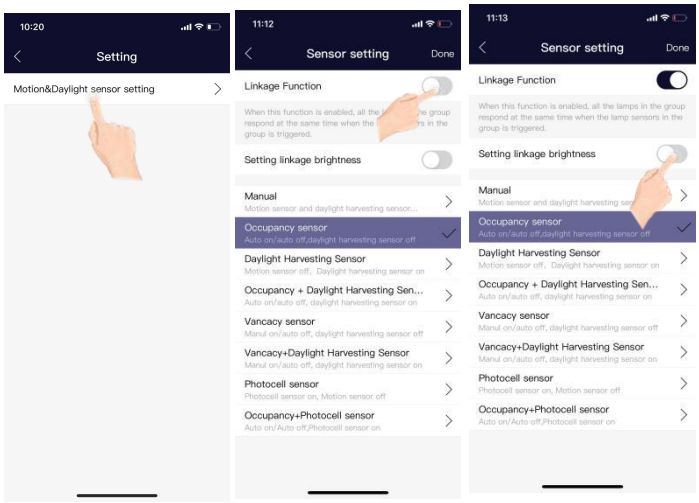
3. Type the group name in the pop-up input box and click "OK" to save it

USER MANUAL

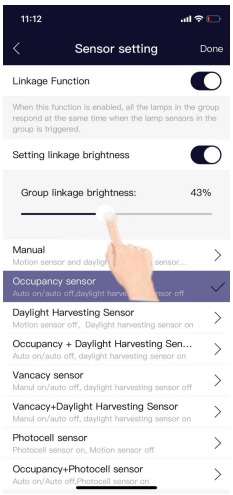
4.2.3.2 Linkage and Parameter setting



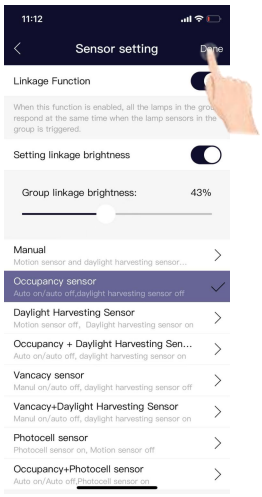
1. Click a group to enter the lamp setting page



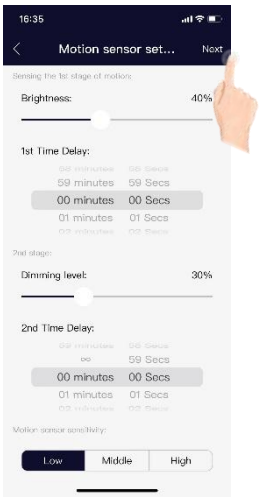
2. Click the "Linkage" sliding switch to turn on/off the linkage function of this lamp group.



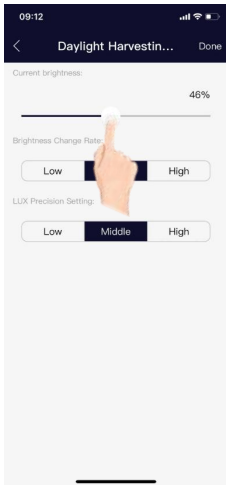
3. Set the linkage brightness in the sensor settings interface.



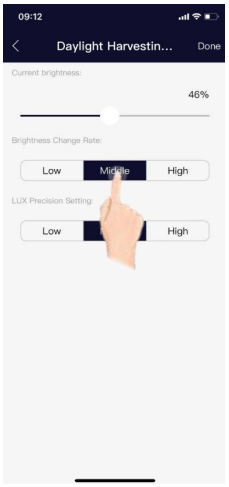
4. Must click"Done" to save the linkage function



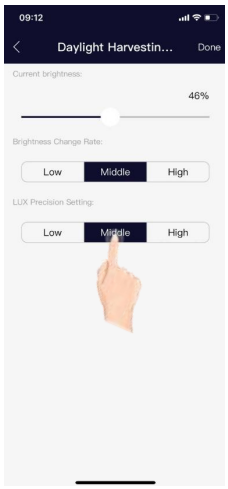
5. If select the daylight harvesting mode, after setting the sensor parameters, click 'Next' to enter this mode



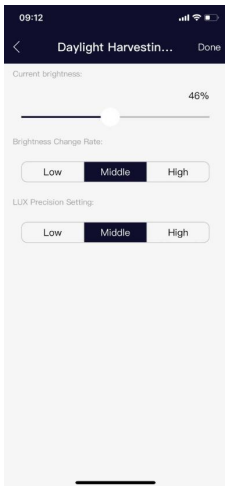
6. Choose the current brightness of the lamp as the memory lux value for daylight harvesting function. When the ambient light turn lower, the brightness of the lamp will increase. When the ambient light turn higher, the brightness of the lamp will decrease to maintain the lux level



7.Brightness Change rate means when the ambient light changes, the speed at which the luminance of the luminaire changes can be changed. There are three types : "Low", "Middle", and "High" modes



8. LUX Precision Setting means you can select the accuracy of lux recognition when daylight harvesting is working.There are three types : "Low", "Middle", and "High" modes

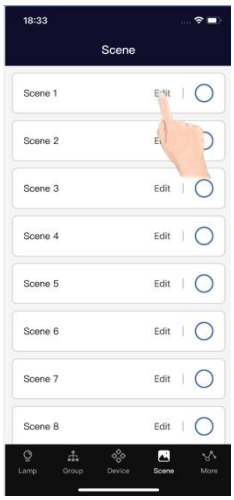


9. Click "Done" to save the setting

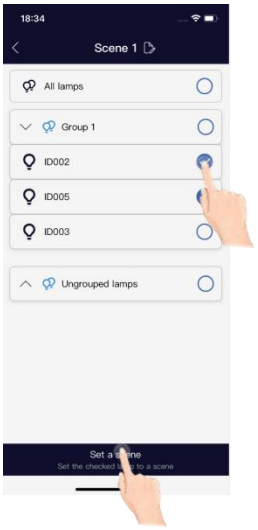
4.2.4 Scenes

Scenes establish programmed settings for individual lights or groups of lights. The Scenes can be set manually by users. There are totally 16 groups in the list.. Activating a scene will cause all members to adopt the settings to the selected scene. Users must add lights first, then the next step is sensor setting before creating groups and scenes.

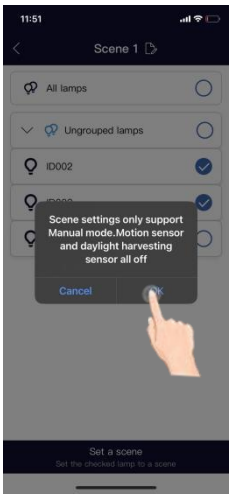
According to the actual application scene, set the required brightness on each lamp.



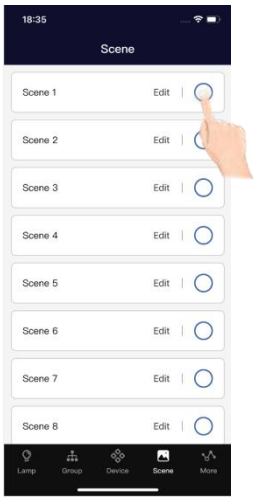
Click the "Edit" on the Scene interface



Click to select the lamps just set, and then click "Set a scene"



Click "OK" to save

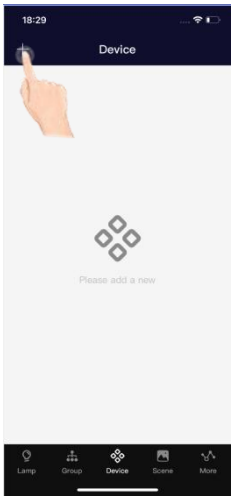


Click" ◯ " to select the lamp you just set, and then click "Set a scene"

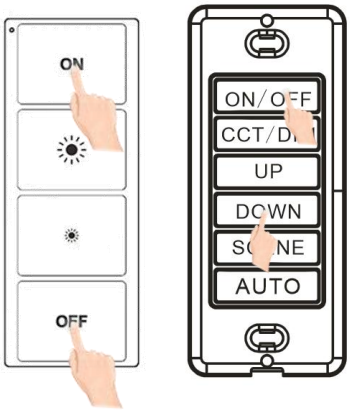
4.2.5 Switch

GEBC smart switches can be added to the APP to control individual lights or groups. Currently two switches are available, one is four button switch, another is six button switch.

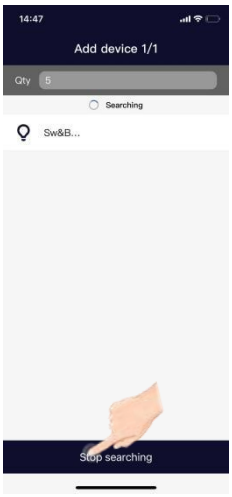
4.2.5.1 Add a Switch



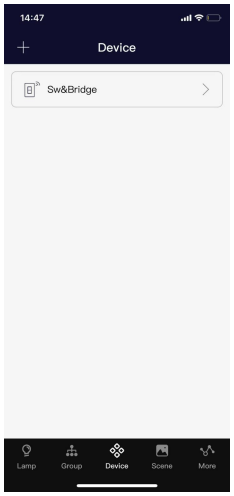
1. Click"+" on the Device interface



2. Press and hold the "ON" and "OFF" (ON/OFF and "DOWN") buttons for 5 seconds, you will find the devices on the app



3. Click "stop searching"



4. Click "Add "

4.2.5.2 Rename and delete the switch

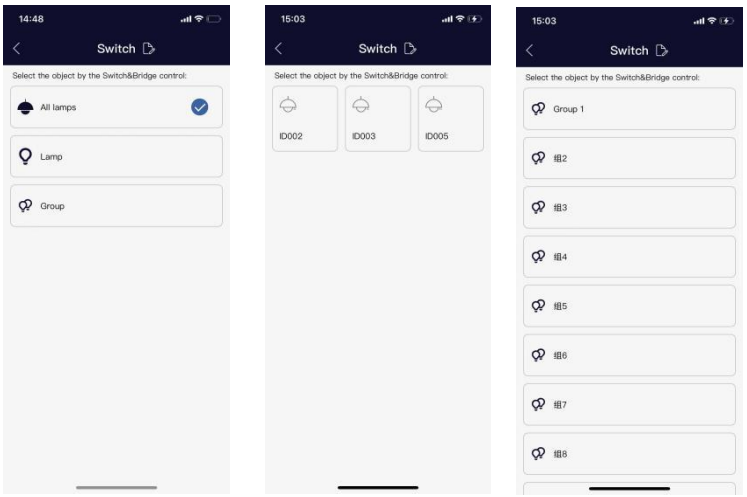
1. Enter the switch parameter setting interface

2. click  to re-name it, and click "OK" to save.

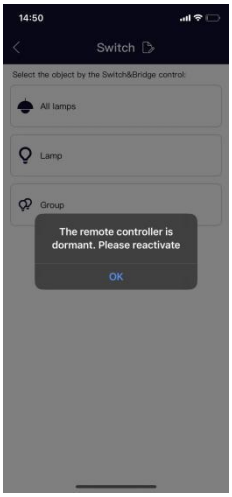
3. Long Press the Switch to delete it

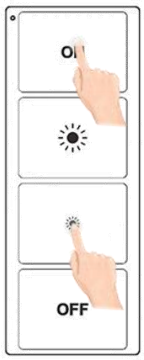
4.2.5.3 Set the switch

1. Enter into the Device interface



2. On the Switch's Configuration interface, All lamps ,single lamp ,Group can be selected

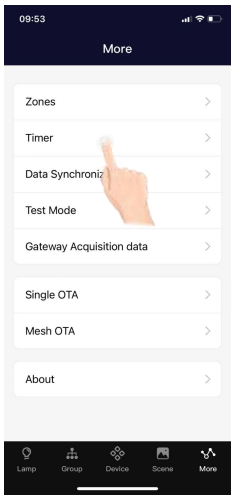




When the remote control is dormant, you need to reactivate(to enter paring mode), long press and hold the "ON" and "DIM—"buttons for 5 seconds until the green light flashes

4.2.6 Schedule（Timer）

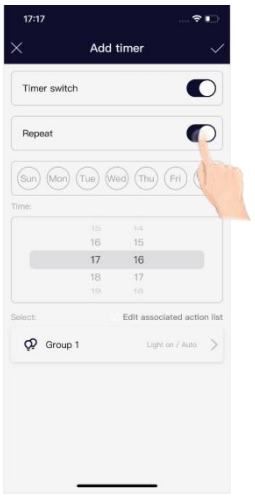
Schedules allow the user to program lighting changes for specific dates and times. Schedules can be applied to an individual light, a group, or a scene.



1. On the "More" interface, click "Timer"

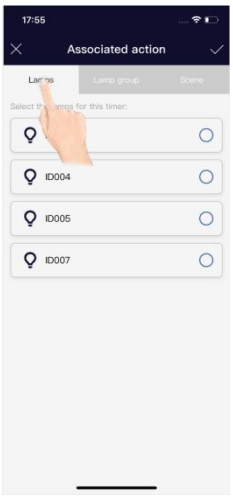
2. Click "+" to add a timer

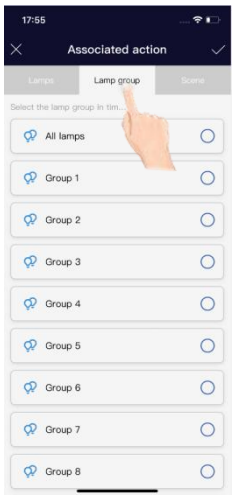
3. Click the  to open or closed the timer



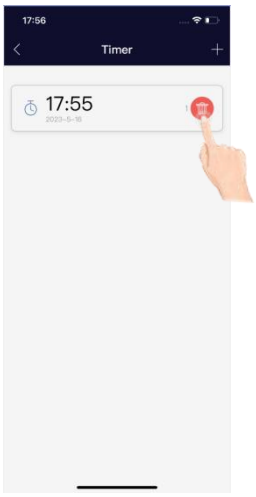
4. Choose whether to repeat date or time.

5. Click "Edit associated action list "





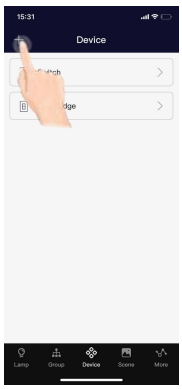
4. Lamps,Lamp group ,and Scene can be associated



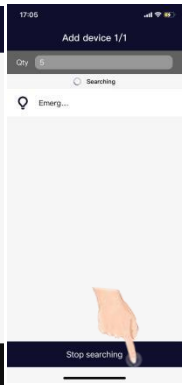
5. Long Press the Timer to delete it

Note: if with gateway(bridge GT-001-GE), if suddenly power off, and after one day, the power is recovered, the timer will also be execute as you set.

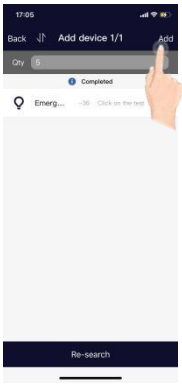
4.2.7 Devices for emergency Kit



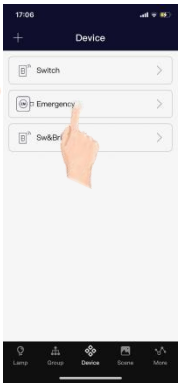
1. Click " +" on Device interface



2. Click "Stop searching"



3. Click "Add" to add the devices



4. Enter into the Device interface

5. On the Emergency Configuration interface, All lamps ,single lamp ,Group can be selected

5. you can choose the emergency brightness and the signal sending interval.

6. Long press the testing button, the green indicator will be on, it means it is in testing mode.

5. Energy monitoring

5.1 General Description

GEBC lighting control system is capable of providing energy monitoring report for customers and clients to better analyze and optimize the lighting energy consumption. The energy data is collected and report is generated by GEBC iOS APP.

5.2 Devices for energy monitoring

You need a GT-001-GE energy monitoring Gateway to collect energy consumption data in order to generate energy report and save to cloud automatically. The features of GT-001-GE include:

•Powered by USB-A receptacle.

•Embedded RTC for time syncing for all devices in the Zone, include super capacitor to keep time during power outage.

•Record energy consumption on line

Please refer to GT-001-GE Specification for detailed information. GT-001-GE record the energy consumption raw log for every devices in the zone and upload this to cloud in 5 minutes interval, this can be changed to 5-15minutes. The data will be saved to one file per month or per year or per day.

And they will never be deleted as they are stored on cloud.

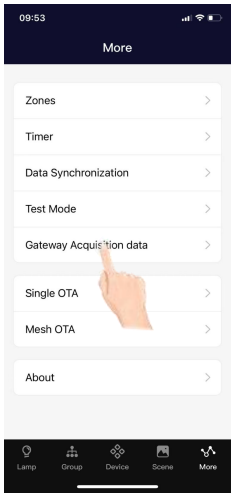
You only need one GT-001-GE for each zone. But it depends on the real installation situation

GT-001-GE
Energy Monitoring
USB Gateway Lite

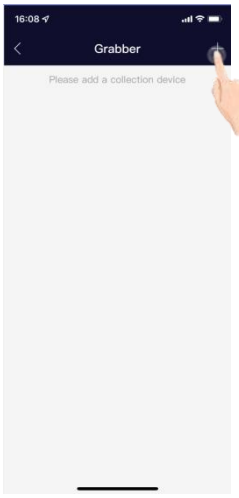
USER MANUAL

5.2.1 Add gateway

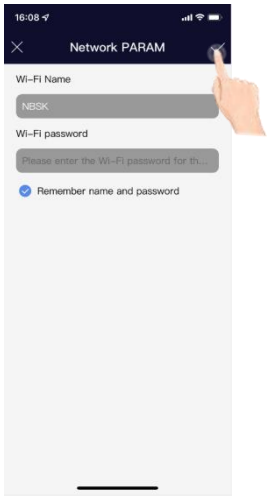
First add the gateway to the internet



1. Click " Gateway Acquisition data" on More interface



2. Click "+" to add a gateway



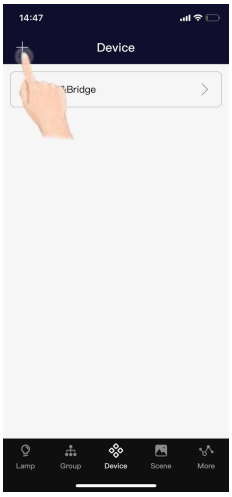
3. Connect the Wi-Fi, and type the password, click" √ " to save

4. Long press the 1 and 3 button until the green light is on

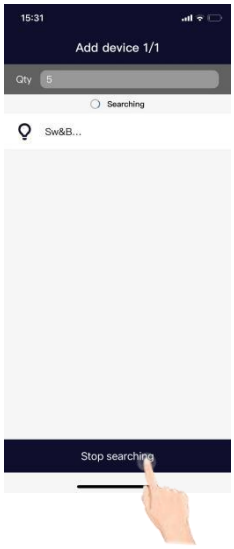
5. "DIST net success" means added successfully, click"×" to back the gateway interface

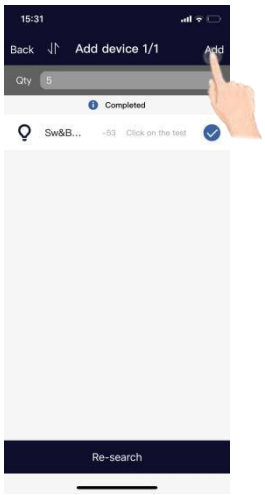
Second add the gateway as a Device

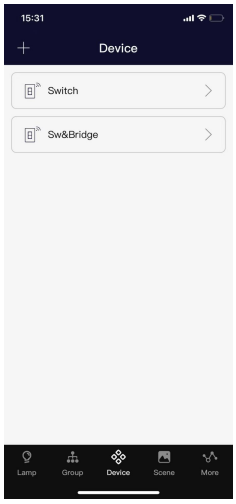
1. Long press the 1 and 2 button until the green light is on



2. Click " +" on Device interface





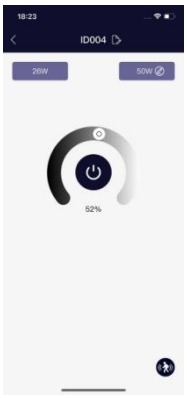


Note: THIS STEP IS A MUST. If not connect to the Internet, the gateway can work as a net-bridge and a Time calibrator

5.2.2 Set the wattage of lamps

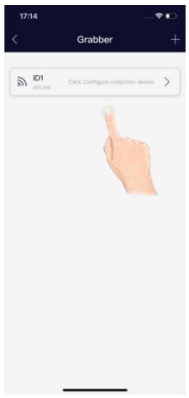
1. Long press a lamp to enter the dimming and management interface.

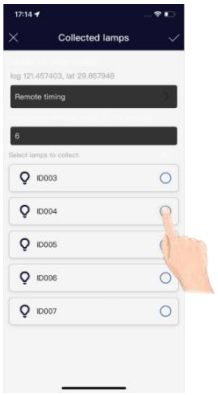
2. Click to set the wattage

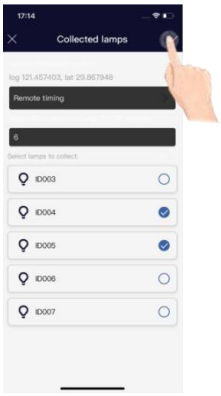


3. Type the real wattage of the lamp, and click "OK" to save.

5.2.3 Collect lamps





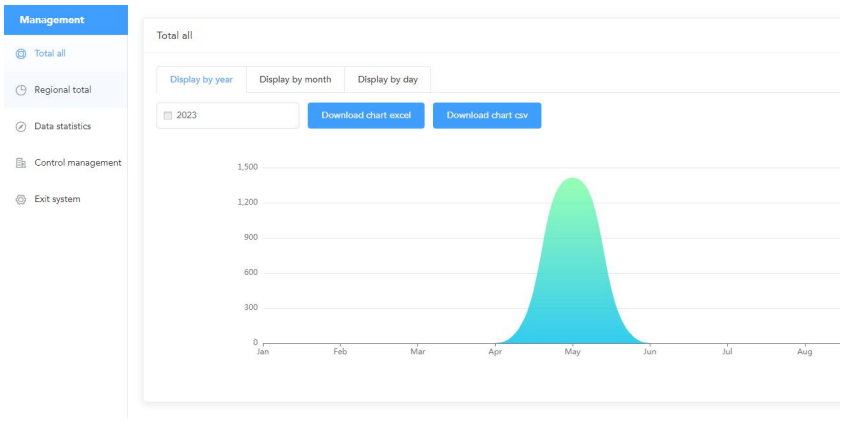


Click the gateway to enter into the "Collected lamps" interface ,select the lamps for energy monitoring ,click " √ " to save

5.3 Get the data from website

Login : https://www.homewellinc.cc:553/web/#/LoginPc
scan the QR code by phone

In management, You can see the total devices Energy consumption display by year, by month and by day, download the chart excel or csv for reference

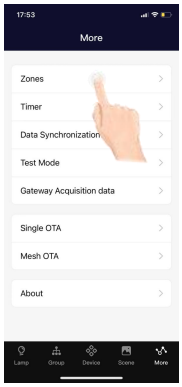


6. QR CODES

Whenever a zone is created, two QR codes can be generated, one for Advanced Permission(the Admin level) and one for Basic Permission (the User level). The QR codes represent the zone, as well as all of the lights, switches. And groups associated with that zone.

The Basic Permission QR code allows the user to dim, activate a scene, or control lights on that zone, but it does not allow the user to add, delete, or change lights, groups, or scenes. The Advanced Permission QR code allows a user to control and edit all settings within the APP. Only users with the Advanced Permission QR codes can share Advanced Permission QR codes.

6.1 To Scan the code

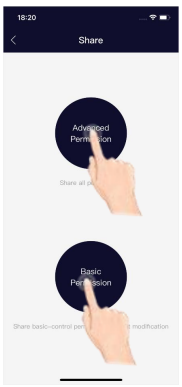


Click "Zones" in "More" interface,

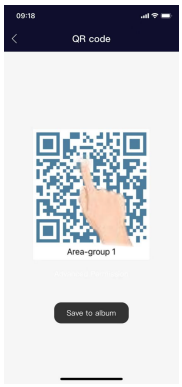
and click  to scan the QR code

6.2 To Save the code

All zones can be found in the **" Zones"** list and you can tap to share



By selecting the corresponding permissions based on the customer type, a QR code can be generated



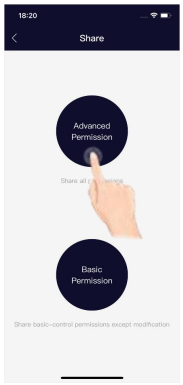
Click **"Save to album"** Then you can find the code in your album

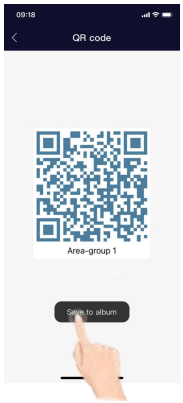
Tips :Each QR code represents a separately managed area and its lamps, switches, and other devices. During the preparation work, it is recommended to prepare the QR codes for all zones, and set the group, scene, and name in advance to reduce on-site work

Basic Permission

Advanced Permission

6.3 To Share the Code





1. From the Zones page, select the Zone to share and click on either Advanced or Basic.

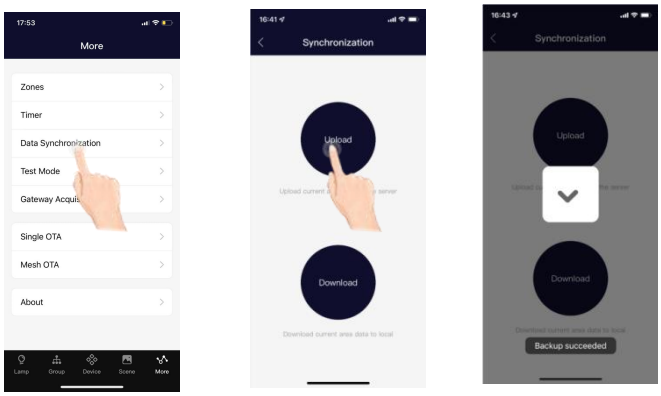
2. A QR code will be displayed on the app.It can then be scanned by another for sharing or you can save the the album or screenshot it and send it to another for scanning.

6.4 To synchronize data to the zones

6.4.1 Upload the data to cloud

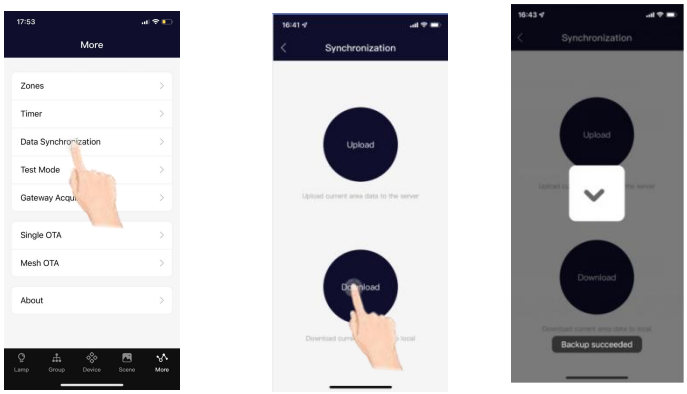
If someone(e.g. workers on site) changed the parameters,what they need to do is upload the data, then others can download.

Click "Synchronize Data" on the "More" interface,open the internet, click "Upload", then the users that the setting of the Zone has been changed.



6.4.2 Download the data to cloud

Users click "Data Synchronization" in More interface ,open the internet ,Click "Download" to synchronize the settings of the zone. If the users don't have the zone, please scan the code to add the zone.

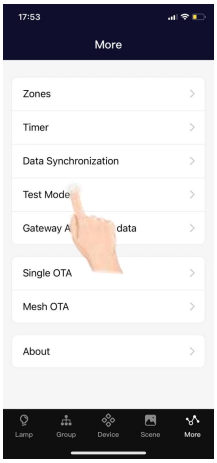


6.4.3 Remote commissioning without gateway step

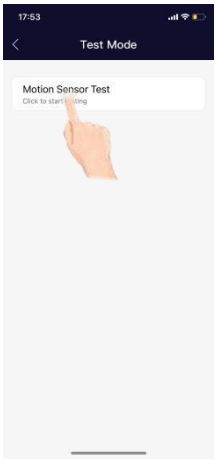
Step 1: For customers	Step 2: For you	Step 3: For customers
1. Create the Zone	4. Scan the code	7. Go to the site, download the date from the cloud in "Data Synchronization"
2. Share the Zone code	5. Set the parameters of the Groups according to customers needs	8. Add the devices to the app
3. Tell us what parameters you want to set for the sensors	6. Upload the date to the cloud in "Data Synchronization"	
		10. Must upload the date to the cloud in "Data Synchronization"

7. Test Function

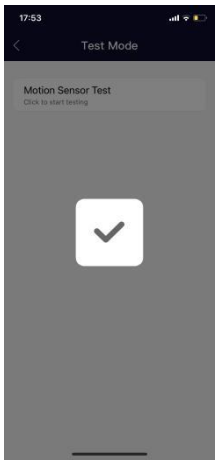
In test mode, when the sensor detect motion, the fixture will be 100% on, after 2 seconds, the fixture will be off. Test mode will be quit automatically in 3 minutes.



1. Click "Test Mode" in "More" interface



2. Click to start

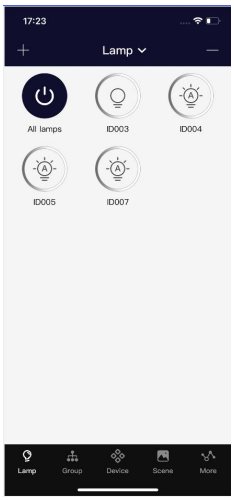


8. RESTORING FACTORY SETTINGS

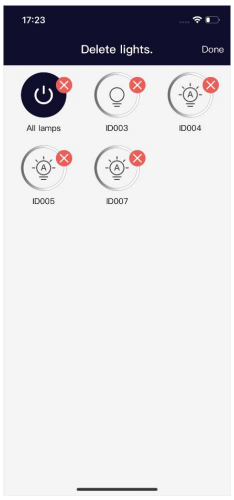
There are five ways to restore factory settings for the lights. (Some ways are suitable for some devices)

8.1 Restore By Deleting Lights on line

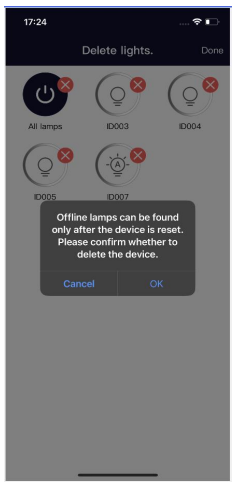
The first way is by deleting lights from the APP. This is the easiest way. When finished testing, must delete the lights online. (After deleting the lights on line, wait for a while to ensure all devices is deleted successfully. Then you can refresh the "Lamp" interface to see there's still some devices.)



1. Click"—"on Lamp interface



2. Click  to delete the lamps



3. This method is only effective for online lamps

8.2 Restore By RC100

First: Press "RESET" button
Second, Press "ON/OFF" button
The lamp flashes once, indicating that the reset is successful.
This way is very useful when someone forgot to delete the lamps online.

8.3 Restore by Reset Button

Some sensors have reset buttons, so when the sensor is on, long press the reset button for around 5 seconds, The lamp flashes once, indicating that the reset is successful.

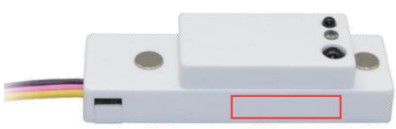
ANT-4E-BLE-GE

ANT-15P-BLE-GE

BRI819P-B-D-BLE-GE

8.4 Restore by magnets

Almost all GEBC products can be restored by magnets. We will have a label stick(Reset) on the product. Put the magnets on the top of the label for 5 seconds.



8.5 Restore By Power Reset (Not Recommend)

The operation steps are as follows:
1. Preparation: the fixture is powered on for the first time, the light is on, wait for 20seconds
2. Continuously power off and on for 5 times, and after the 6th power on, the lamp flashes once, that the reset is successful

More Operation video on Youtube
https://www.youtube.com/playlist?list=PL9r1QfMK3L7QR366RaUjDR6BLFoof7PPf

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