

# ABBA

LIGHTING USA

*12V Landscape Light Specialist*



# STS150 AND









## INSTALLATION GUIDE

[www.ABBALightingUSA.com](http://www.ABBALightingUSA.com)

## RATED VOLTAGE 12V

Congratulations on your purchase of this high-quality product! We want to ensure that you have the best possible experience with it, so we kindly ask that you take a moment to carefully read and follow all instructions before assembly, installation, and use. By doing so, you'll not only guarantee correct function and safety, but also optimize the full potential of this exceptional product. Thank you for choosing us as your trusted provider of top-notch products - we truly appreciate your business!

### **WARNING: TO REDUCE THE RISK OF FIRE OR INJURY TO PERSONS:**

-  For safety reasons, we recommend that only a qualified professional install this electrical product.
-  Before attempting to install this unit, ensure all power connections are off for your own safety.
-  Fixture(s) must be installed in accordance with all local codes and ordinances.
-  Do not instal within 10 feet of a pool, spa or fountain
-  **DO NOT DISASSEMBLE**
-  To ensure proper functionality and safety, it is important to refrain from connecting two or more transformers in parallel. It is advised to maintain individual electrical circuits for each transformer rather than attempting to combine their outputs. By adhering to this guideline, you can prevent potential complications and optimize the performance of each transformer.
-  For optimal performance and safety, it is recommended not to utilize this device in conjunction with a dimmer switch. Avoid connecting the device to any dimming mechanism as it may lead to undesirable consequences or malfunctioning. It is advisable to operate the device without the use of a dimmer to ensure its intended functionality and prevent any potential risks.
-  To ensure the highest level of safety, it is recommended to directly plug the transformer into a Ground Fault Circuit Interrupter (GFCI) outlet. By utilizing a GFCI outlet, you enhance protection against electrical shocks and minimize the risk of electrical hazards.

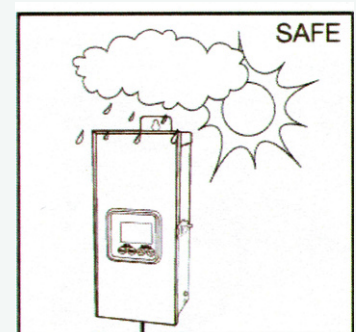


- ✔ To maintain optimal performance and safety, it is strongly advised against using an extension cord with this device. It is recommended to directly connect the device to a properly grounded power outlet. Using an extension cord may introduce electrical inefficiencies, increase the risk of overheating, or compromise the device's functionality. It is best to avoid extension cords and ensure a direct and secure power connection for the device.
- ✔ It is important to note that the maximum output capacity of this transformer is 150 Watts. To ensure safe and optimal operation, it is crucial to avoid exceeding this specified limit. Overloading the transformer by drawing power beyond its maximum capacity can lead to overheating, reduced efficiency, and potential damage to the device. It is highly advised to carefully monitor the power requirements of your equipment and ensure they fall within the specified limits of the transformer to maintain its performance and longevity.

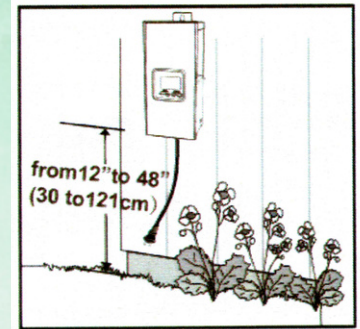
## WARRANTY

- We stand behind the quality of our product and offer a 2-year warranty from the date of purchase. Please note that the warranty is valid from the date of purchase, not from the date of installation. Kindly ensure that you keep the proof of purchase as it will be required for any warranty claims.
- Warranty will be void if there is any damage due to improper usage or modification to the fixture.
- Failure to comply with the instruction in this manual may increase the risk of damage or injury and will void warranty.

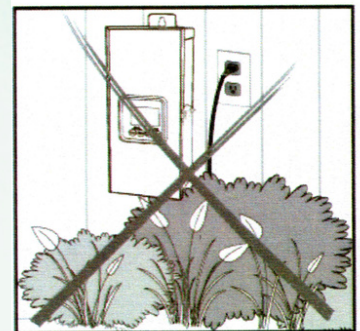
We assure you that this transformer is designed with utmost consideration for safety, making it suitable for both indoor and outdoor applications. You can confidently utilize this transformer in various environments without any concerns about compromising safety standards. Moreover, it is essential to note that this transformer is specifically engineered to be weatherproof, offering enhanced protection against the elements. This means that you can rely on its performance and durability even when exposed to challenging weather conditions. Whether you are working on a project indoors or venturing into outdoor settings, this transformer provides a secure and dependable solution for your electrical needs.



To ensure proper installation of the transformer, it is essential to position it at a level where the controls are readily visible and easily accessible. This ensures convenient operation and maintenance of the transformer. When selecting the installation location, carefully consider factors such as line of sight and ergonomic accessibility. By placing the transformer at an appropriate level, you will be able to monitor and adjust its settings with ease, facilitating efficient and effective usage. Prioritizing the visibility and accessibility of the controls when installing the transformer contributes to a user-friendly and ergonomic setup.



It is crucial to avoid installing the transformer in a position that obstructs or blocks the sensor responsible for the dusk-to-dawn mode. When choosing the installation location, be mindful of the sensor's line of sight and ensure that it remains unobstructed. Placing the transformer in a position that allows the sensor to function optimally ensures the proper operation of the dusk-to-dawn mode, which automatically adjusts the transformer's functionality based on ambient light levels. By preventing any obstructions to the sensor, you guarantee the reliable and accurate performance of this mode, enhancing the overall efficiency and effectiveness of the transformer's operation.



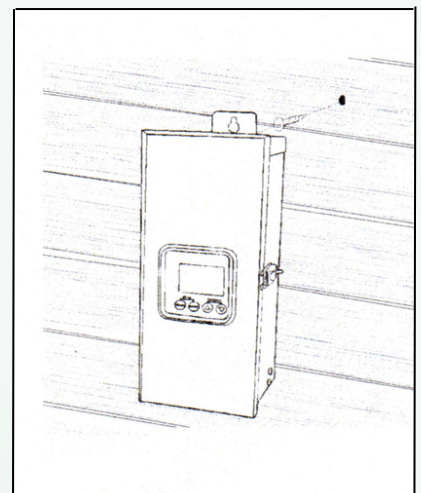
## **MOUNT THE INSTALLATION**

To mount the transformer on a wall near an electrical outlet, carefully follow these step-by-step instructions:

Choose a suitable location on the wall near the electrical outlet where you intend to install the transformer. Ensure that the chosen spot allows for easy access to the outlet and is appropriate for the weight and size of the transformer.

Hold the transformer against the wall at the desired mounting height. Position it in a way that aligns with the electrical outlet and any necessary connections.

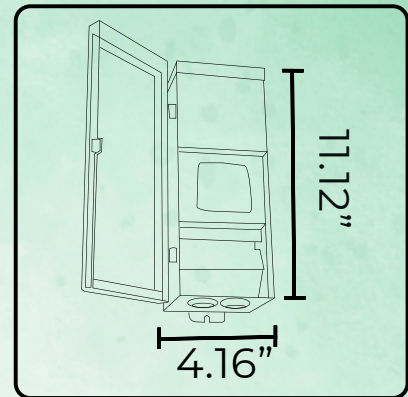
With a pencil or marker, mark the spots on the wall where the screw holes of the transformer will align. These marks will serve as a guide for secure mounting.





Obtain appropriate screws that are compatible with the wall material and the transformer's mounting holes. Generally, wall anchors may be necessary for mounting on drywall or other fragile surfaces. If unsure, consult a hardware store or professional for suitable mounting hardware.

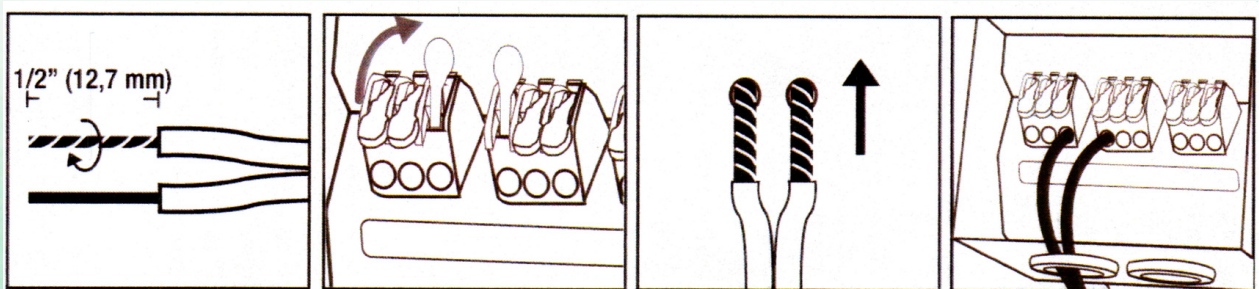
Using a suitable screwdriver or drill, carefully insert the screws through the mounting holes of the transformer and into the marked spots on the wall. Ensure that the screws are driven straight and fully into the wall, providing a secure hold.



Once the screws are tightly secured, verify that the transformer is firmly mounted on the wall by giving it a gentle tug or shake. Ensure that it does not move or feel loose.

**Please ensure that you do not exceed the capacity of the transformer as it can lead to overheating and overload, potentially reducing its lifespan. It is recommended to utilize only up to 85% of the transformer's capacity.**

**To mitigate voltage drops effectively, it is advisable to employ the 15V block. This particular device ensures a stable and consistent voltage supply, minimizing any potential reduction in voltage levels throughout the electrical system. By utilizing the 15V block, you can maintain a reliable power flow and prevent any undesirable fluctuations that could impact the performance or functionality of connected devices.**



**To prepare the landscape wire for connection, follow these simple steps:**

- Strip 1/2 inch of insulation from both wires.

- Twist the exposed ends of the wires together tightly.
- On the terminal block, locate the lever, which is a small movable mechanism used to secure or release the electrical connections.

**To connect the wires to the transformer, please carefully follow these step-by-step instructions:**

- Locate the "COM" block terminal on the transformer. This terminal is designated for the common wire connection.
- Take the first wire and insert it into the "COM" block terminal. Ensure that the wire is fully inserted and securely positioned within the terminal.
- Identify the "15V" block terminal on the transformer. This terminal is intended for the connection of the other wire.
- Insert the second wire into the "15V" block terminal, ensuring a secure and complete insertion within the terminal.
- Once both wires are correctly positioned in their respective block terminals, locate the levers associated with each terminal block.
- Using gentle pressure, push the levers down to secure the wires in place. Confirm that the levers are fully engaged and that the wires are firmly held within the block terminals.

**After connecting the wires to the terminal blocks, it is vital to verify that they are securely and properly positioned. Follow these steps to ensure a secure connection and complete the installation:**

1. Carefully inspect the terminal blocks to confirm that the wires are fully inserted and tightly secured within their respective terminals. Make sure there are no loose or exposed wires.
2. Gently tug on each wire to ensure it is firmly held in place and does not come loose. This step helps verify the stability of the connections.
3. Once you have confirmed the secure placement of the wires, proceed to close the casing of the transformer. Align the casing properly with the unit.



4. Double-check that the casing is closed securely and there are no gaps or openings.

By following these instructions, you will guarantee that the wires are securely placed within the terminal blocks, minimizing the risk of disconnections or electrical issues. Additionally, closing the casing properly provides protection to the internal components of the transformer.

## **RUN THE LANDSCAPE WIRE (SOLD SEPARATELY)**

**To ensure proper installation of the landscape wire, please follow these guidelines:**

- When running the landscape wire, make sure it extends directly from the transformer to each light without any cuts or interruptions. This uncut wire connection helps maintain a consistent and reliable electrical flow throughout the lighting system.
- Exercise caution and avoid running the wire within a proximity of 10 feet (3 meters) to any pools, spas, or fountains. This safety measure prevents any potential hazards associated with water and electrical components. It is important to prioritize the safety of individuals and the proper functioning of the electrical system.
- In the event that the landscape wire is longer than needed, you may need to trim it to the appropriate length. To cut the wire, use a cable cutter specifically designed for this purpose. Ensure that the cable cutter is suitable for the wire's gauge and thickness. Following the manufacturer's instructions, carefully cut the wire to the desired length.
- By adhering to these instructions, you will ensure the integrity and safety of the landscape wire installation. The wire should remain uncut as it runs from the transformer to each light, while maintaining a safe distance from pools, spas, or fountains. If necessary, use a cable cutter to trim the wire to the required length.

**When selecting the cable gauge, consider the distance between the transformer and the lighting fixtures. It is crucial to choose an appropriate gauge to ensure efficient power transmission and minimize voltage drop.**

**Please note that this chart provides general recommendations, and it is essential to consider specific factors such as the power requirements of your lighting system and any local electrical codes or regulations that may apply. Consulting with a qualified electrician can provide further guidance and ensure the proper selection of cable gauges for your specific installation.**



## HOW TO CHOOSE THE RIGHT LOW VOLTAGE WIRE:

Feet	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
Watts																					
40	16	16	16	16	16	16	16	14	14	12	12	12	12	12	12	12	12	12	10	10	
60	16	16	16	16	16	16	14	14	14	12	12	12	12	12	12	12	12	10	10	8	
80	16	16	16	16	14	14	14	14	14	12	12	12	12	10	10	10	10	10	10	8	8
100	16	16	14	14	14	14	14	12	12	12	12	10	10	10	10	10	10	10	8	8	8
120	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	8	8	8	8	8
140	12	12	12	12	12	12	12	10	10	10	10	10	10	8	8	8	8	8	8	8	8
160	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8				
180	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8					
200	12	12	12	12	12	10	10	10	8	8	8	8	8	8							
220	12	12	12	12	10	10	10	8	8	8	8	8									
240	12	12	12	10	10	10	8	8	8	8											
260	12	12	10	10	10	8	8	8	8												
280	12	10	10	10	8	8	8	8													
300	12	10	10	10	8	8	8														
320	12	10	10	10	8	8	8														
340	12	10	10	10	8	8	8														
360	12	10	10	8	8	8															

**1. LOWER GAUGE WIRES ARE THICKER AND CONTAIN MORE COPPER. THEY HAVE A GREATER CURRENT CARRYING CAPACITY FOR LONG RUNS**

**2. ITS BEST TO NOT EXCEED MORE THAN 80% OF YOUR LANDSCAPE WIRE CURRENT CAPACITY TO ENSURE THERE IS NO VOLTAGE DROP**

**EXAMPLE: IF YOUR TOTAL WATTAGE OF YOUR LANDSCAPE LIGHTS IS 40 WATTS, THEN YOU CAN RUN 200 FEET OF 12 GAUGE WIRE WITHOUT VOLTAGE DROP.**

## POWER UP THE TRANSFORMER

To test the fixtures and change the mode to "ON," please follow these instructions:

- Take the plug of the transformer and insert it into the GFCI plug. Make sure it is fully inserted and securely connected.
- Once the transformer is plugged into the GFCI plug, you can proceed with testing the fixtures. Turn on the power to the transformer.
- Set the mode switch to the "ON" position. This will activate the fixtures and provide a continuous power supply.

Observe the connected fixtures to verify that they are illuminated and functioning correctly. Check for any signs of flickering, dimness, or malfunctions.

## SETTING UP THE TRANSFORMER



**This transformer offers two convenient methods for setting its operation: through a smartphone app or manually on the transformer itself. Here are the details for the manual setting options available:**

**On/Off/Auto (Photo Sensor) Mode:** The transformer provides three options for this mode:

**On:** In this mode, the connected lights will remain continuously on, regardless of ambient light conditions.

**Auto (Photo Sensor):** This mode utilizes a built-in photo sensor on the transformer. The connected lights will automatically turn on at dusk and turn off at dawn, based on the detected ambient light levels. It offers a convenient dusk-to-dawn working mode, ensuring efficient and automated lighting control.

**Off:** In this mode, the connected lights will remain continuously off.

**Timer Mode:** The transformer also offers three timer options, allowing the lights to remain on for a specified duration after dusk. You can choose from 2, 4, 6, or 8-hour durations. Here's how it works:

Selecting the desired timer duration will trigger the lights to turn on at dusk and remain illuminated for the specified time period (e.g., 4, 6, or 8 hours). After the set duration, the transformer will automatically turn off the lights, conserving energy and providing flexibility for customized lighting schedules.

By using the transformer's manual settings, you can easily configure the desired mode of operation for your lighting system. Whether you prefer continuous illumination, automated dusk-to-dawn functionality, or timed durations, this transformer offers versatile options to suit your needs.



## PRESS DOWN 3 SECONDS FOR WI-FI CONNECTING

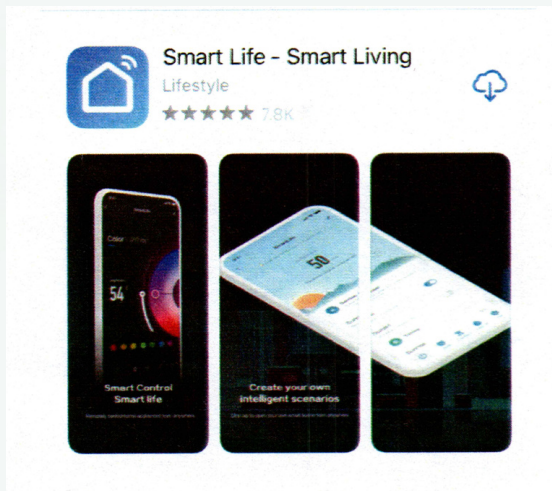


**WIFI MODE**



**During setup, the transformer's LED blinks to indicate it is connecting to Wi-Fi**

## DOWNLOAD THE APP



**To find the "Smart Life" app, follow these steps based on your smartphone's operating system:**

**For Apple iPhone users:**

- Open the App Store on your iPhone. In the search bar, type "Smart Life" and press Enter.
- Look for the "Smart Life - Smart Living" app by Tuya Inc.
- Tap on the app to access its details.
- Tap "Install" to download and install the app on your iPhone.

**For Android users:**

- Open the Google Play Store on your Android device.
- Tap the search bar and enter "Smart Life."
- Look for the "Smart Life - Smart Living" app by Tuya Inc.
- Tap on the app to access its details.
- Tap "Install" to download and install the app on your Android device.

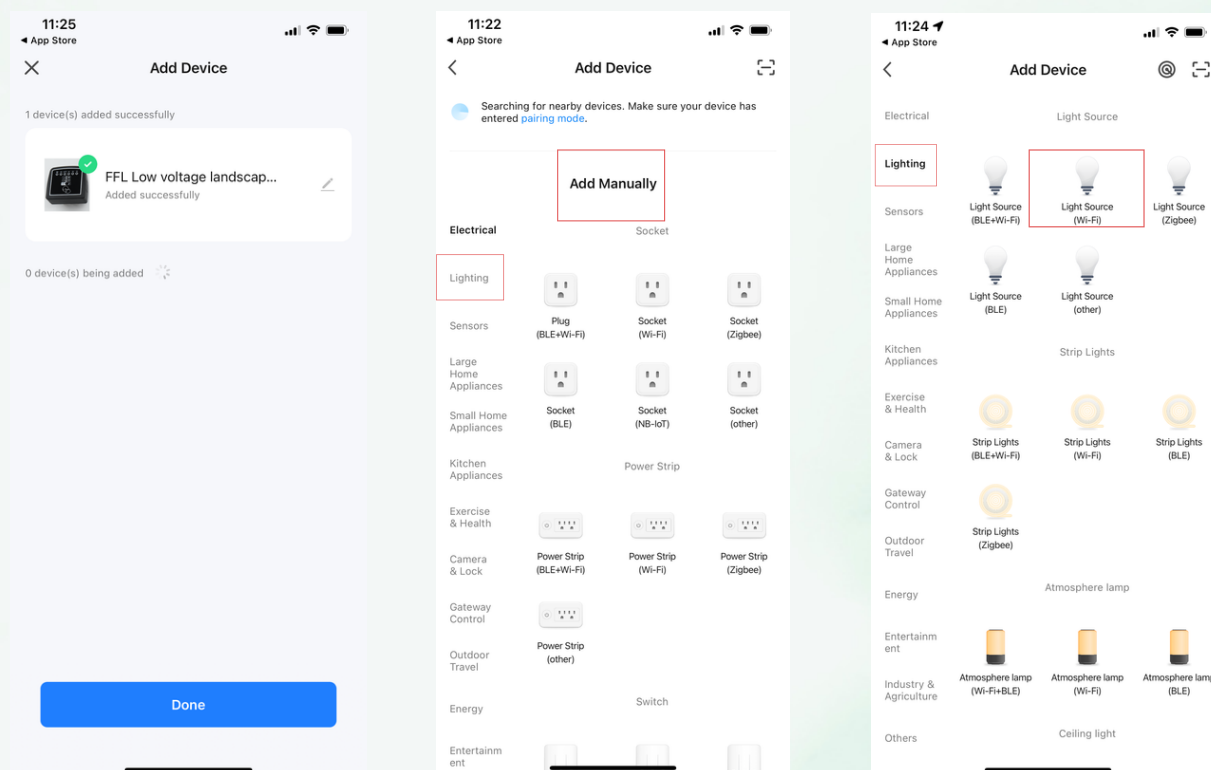
## ADD A DEVICE

- Tap on the Smart Life app icon to open it.
- Once the app is open, navigate to the device or settings section where you can configure your transformer.

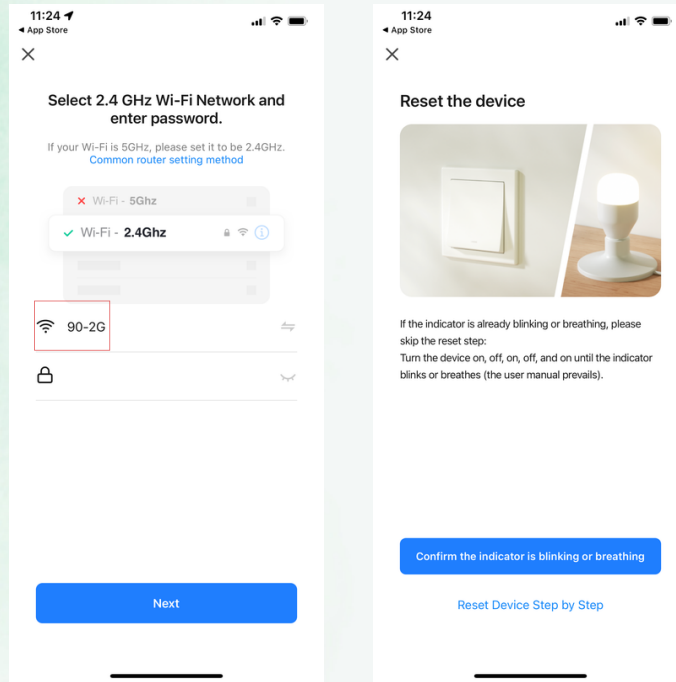
**To connect the transformer to your home Wi-Fi network, follow these steps in the Smart Life app:**

Open the Smart Life app on your smartphone.

- Ensure that the Wi-Fi icon is blinking, indicating that the app is searching for available Wi-Fi networks.
- In the app, locate and select the option to choose the Wi-Fi network.
- Look for the available Wi-Fi networks and select your home Wi-Fi network from the list.
- If prompted, enter your Wi-Fi network's passcode or password using the on-screen keyboard.
- Once you have entered the correct passcode, proceed to confirm or initiate the connection process.
- The app will attempt to connect the transformer to your home Wi-Fi network using the provided information.
- Wait for the app to establish the Wi-Fi connection between the transformer and your home network. This process may take a few moments.





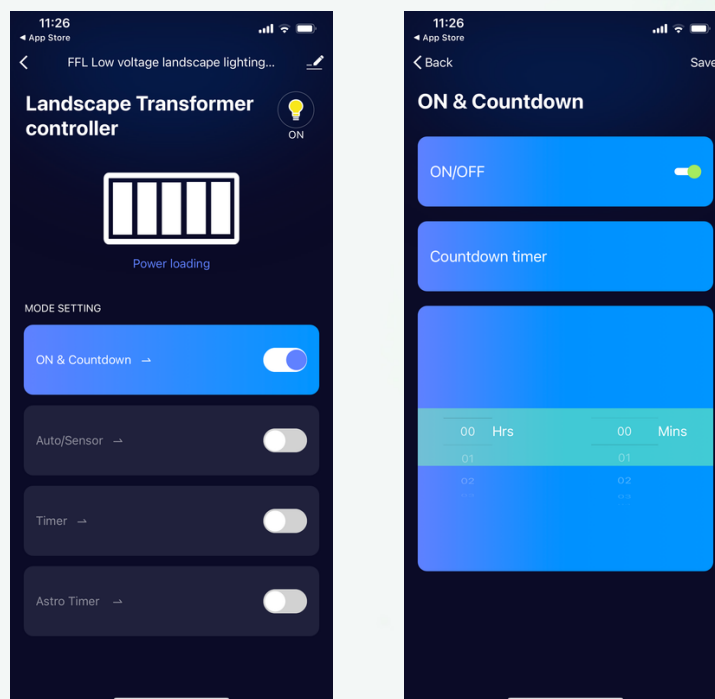


**Please ensure that the Wi-Fi indicator is flashing.**

## USING THE APP

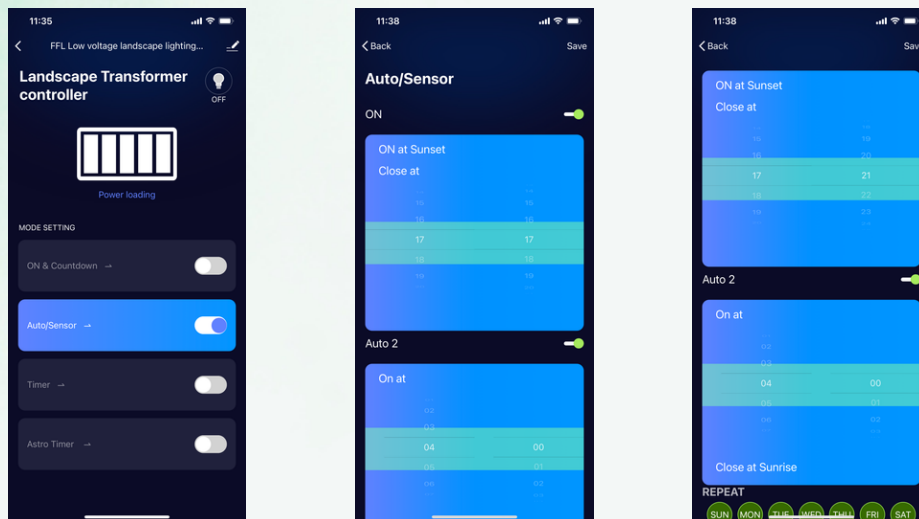
### ON/OFF COUNTDOWN TIMER

You have the ability to toggle the transformer on and off using this mode. Additionally, when in the "on" mode, you can choose to enable the countdown timer option. Please remember to always save any of your settings.



## PHOTO SENSOR/ AUTO MODE

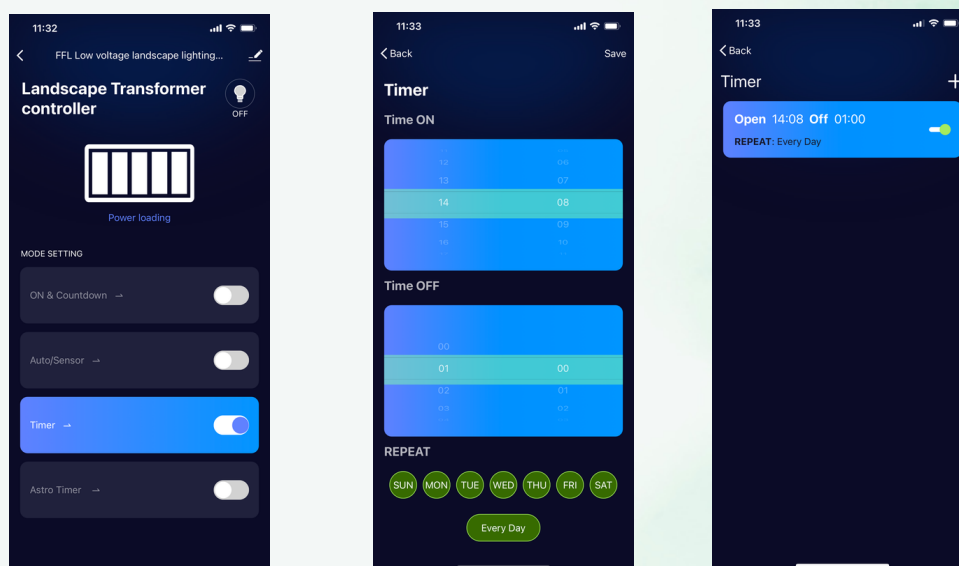
The default mode for the transformer is to turn it "on" and "off" based on the photo sensor on the transformer itself. However, if you prefer not to have the light turned on throughout the night, there is an option to choose when you want it to be off during the first period (Auto1) and on at a specific time in the early morning during Auto2. The default mode will ensure that it turns off at dawn time. It's important to note that if you select the off time at dawn time in the first period (Auto1), it will not affect the operation of Auto2. Remember to always "save" any settings you make.



## TIMER MODE SET

You have the ability to customize the transformer's operation by setting specific on/off times according to your preferences. This means you can choose the exact times when you want the transformer to be turned on or off. Additionally, you have the option to configure multiple on/off cycles throughout the day, allowing for greater flexibility in controlling its functionality.

It is crucial to keep in mind that after making any changes to the settings, you must remember to save them to ensure that they are applied and preserved for future use. Saving your settings will prevent any unintentional loss of configurations and ensure that the transformer operates according to your desired schedule.

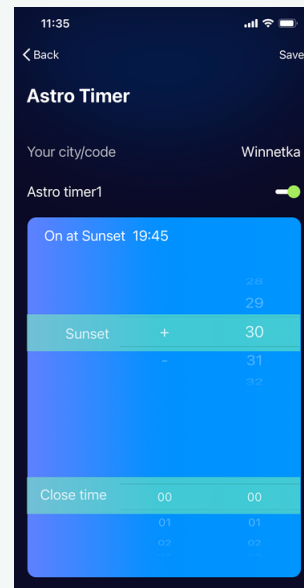
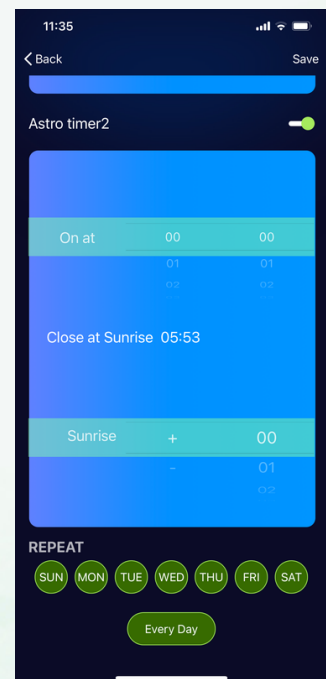
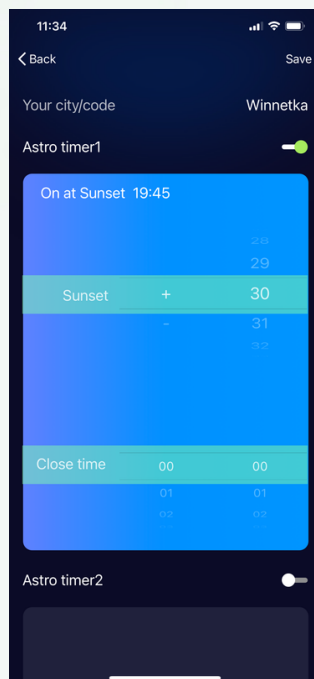
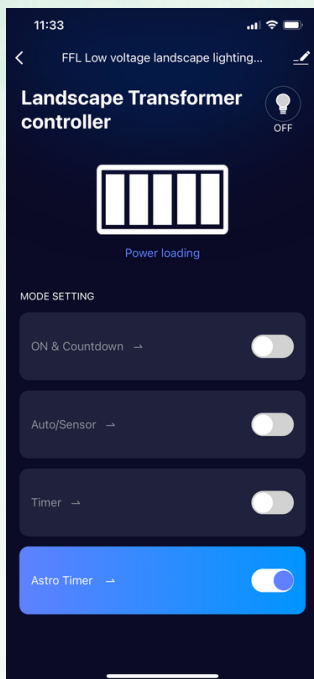




## ASTRONOMIC TIMER MODE SET (MAKE SURE YOUR CITY/LOCATION ON THE APP IS RIGHT)

The default mode for the transformer is to be automatically turned on and off based on the local sunset and sunrise times. However, if you prefer not to have the light on throughout the entire night, there is an option to select when you want it to be turned off during the first period (Astro1) and on at a specific time in the early morning during Astro2. By default, the transformer will turn off at sunrise time.

It's important to note that if you choose to set the off time at sunrise during the first period (Astro1), it will not affect the operation of Astro2. In other words, the transformer will still follow the specified on/off schedule during Astro2, regardless of the setting for Astro1. To ensure that your chosen settings are applied and maintained, always remember to save them after making any modifications. Saving your settings will prevent any unintended changes and ensure that the transformer operates according to your desired timing preferences.



## TROUBLE SHOOTING TIPS

In case you encounter difficulties while attempting to establish a connection:

- Please ensure that the Wi-Fi network you are attempting to connect to is operating on a 2.4GHz frequency. The transformer will not be able to establish a connection if the network operates solely on a 5GHz frequency.
- We recommend testing your Wi-Fi network with other devices, such as your phone, to verify that it is functioning correctly. This will help ensure that any connectivity issues you are experiencing are not specific to the transformer, but rather related to the network itself.
- During the setup process, it's possible that the Wi-Fi connection may have insufficient coverage. To address this, We suggest moving the transformer closer to your Wi-Fi router. By doing so, you can improve the signal strength and increase the chances of a successful connection.
- Please note that your Wi-Fi network password is case sensitive. It is important to double-check and ensure that you have entered the correct password, paying careful attention to capitalization.

## PLEASE ALSO CHECK THE APP USER GUIDE FOR MORE INFORMATION

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

**NOTE.** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.