

## SURAIELEC ULTA10C

# SURAIELEC 100W Low Voltage Pool Light Transformer User Manual

Model: ULTA10C

## 1. INTRODUCTION

---

This manual provides essential information for the safe installation, operation, and maintenance of your SURAIELEC 100W Pool Light Transformer. This transformer is designed to convert 120V AC input to selectable 12V, 13V, or 14V AC low voltage outputs, suitable for pool, spa, fountain, and landscape lighting applications. It features a grounded shield for enhanced safety and is UL Listed.

## 2. SAFETY INFORMATION

---

**WARNING:** Risk of electric shock. Improper installation or use can result in serious injury or death. Always consult a qualified electrician for installation.

- **UL Listed:** This transformer is UL certified, ensuring it meets recognized safety standards. Adhere to all local electrical codes and ordinances during installation.
- **Grounding:** Ensure the transformer is properly grounded to prevent electrical hazards.
- **Power Disconnection:** Always disconnect power at the circuit breaker before performing any installation, wiring, or maintenance.
- **Water Exposure:** While the enclosure is weatherproof, avoid direct submersion or installation in areas prone to flooding. Ensure all connections are sealed and protected from moisture.
- **Ventilation:** Install the transformer in a location that allows for adequate air circulation to prevent overheating.
- **Load Capacity:** Do not exceed the transformer's maximum wattage capacity of 100W. Overloading can cause damage and create fire hazards.

## 3. PACKAGE CONTENTS

---

The package includes:

- SURAIELEC 100W Pool Light Transformer (Model ULTA10C)
- Overload Protection (integrated)
- Mounting brackets and screws

## 4. SPECIFICATIONS

---

Specification	Value
Brand	SURAIIELEC
Model	ULTA10C
Power Source	AC
Input Voltage	120V AC
Output Voltage	12V, 13V, 14V AC (Multi-Tap)
Wattage	100W
Current Rating	0.83 Amps
Frequency	60 Hz
Mounting Type	Wall Mount
Enclosure Rating	NEMA 3R (Weatherproof, Shock-Resistant Metal Housing)
Certification	UL Listed

## 5. INSTALLATION

---

**Important:** Ensure power is disconnected at the main circuit breaker before beginning installation.

### 5.1 Mounting the Transformer

1. Select a suitable wall location for mounting. The transformer is designed for both indoor and outdoor use, but should be protected from direct water spray and excessive heat.
2. Use the integrated mounting brackets on the transformer. Mark the positions for drilling pilot holes.
3. Securely fasten the transformer to the wall using appropriate screws and anchors for your mounting surface. Ensure it is level and stable.

## Ideal for Outdoor and Indoor Use



Figure 1: Transformer mounted on a wall, showing its weatherproof enclosure and knockout locations.

### 5.2 Wiring the Transformer

The transformer features separate compartments for high voltage (120V AC input) and low voltage (12V/13V/14V AC output) wiring for organized and safe connections. Utilize the knockout holes for conduit connections.

1. **120V AC Input:** Connect the 120V AC power supply wires to the designated input terminals within the high voltage compartment. Typically, this involves connecting the Line (black) and Neutral (white) wires.
2. **Grounding:** Connect the ground wire from your power supply to the ground terminal inside the transformer. This is critical for safety.
3. **Low Voltage Output:** Identify the desired output voltage (12V, 13V, or 14V AC) based on your lighting requirements and cable length. Connect your low voltage lighting wires to the corresponding output terminals in the low voltage compartment. The common (COM) terminal should be connected to one side of your lighting circuit, and the selected voltage terminal (12V, 13V, or 14V) to the other.
4. Ensure all wire connections are secure and properly insulated with wire nuts or appropriate connectors.
5. Close and secure both wiring compartment covers.



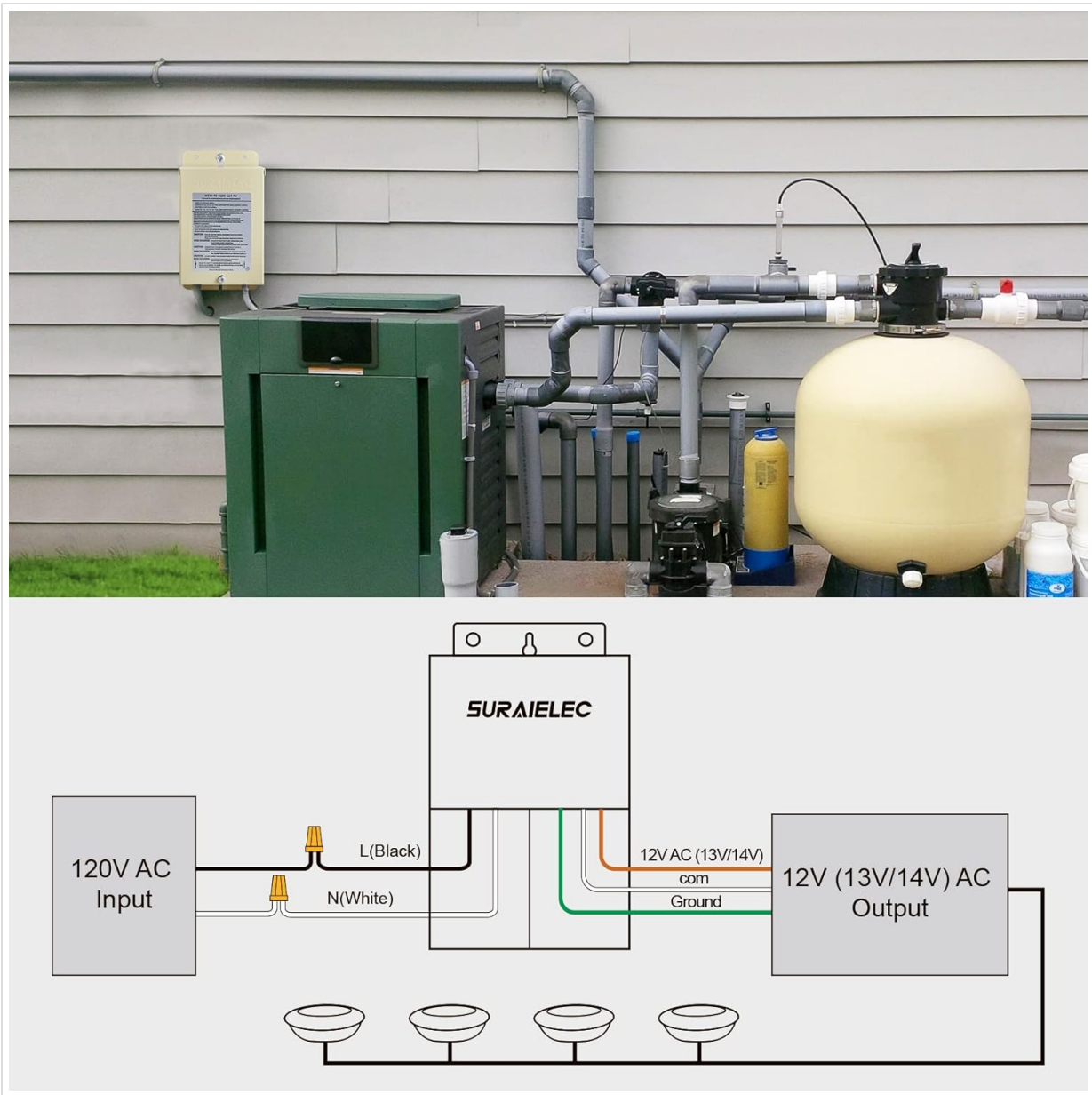


Figure 3: Typical installation diagram showing electrical connections to pool lights.

### 5.3 Dimensions

Consider the transformer's dimensions for proper placement and clearance.



Figure 4: Transformer dimensions for installation planning.

## 6. OPERATION

Once installed and wired correctly, restore power at the circuit breaker. The transformer will provide the selected low voltage output to your connected lighting fixtures.

- **Voltage Selection:** The transformer offers 12V, 13V, and 14V AC outputs. Choose the appropriate voltage based on the requirements of your lighting fixtures and the length of your low voltage wiring run. Longer wire runs may benefit from higher voltage settings to compensate for voltage drop.
- **Compatibility:** This transformer is compatible with smart switches and photocell sensors for automated control of your lighting system. Ensure any connected control devices are rated for the transformer's input voltage and current.





Figure 6: Examples of suitable lighting applications.

## 7. MAINTENANCE

---

The SURAIELEC 100W Pool Light Transformer is designed for durability and minimal maintenance. Follow these guidelines to ensure optimal performance and longevity:

- **Regular Inspection:** Periodically inspect the transformer and its wiring for any signs of damage, corrosion, or loose connections.
- **Cleaning:** Keep the exterior of the transformer clean and free from debris. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Ventilation:** Ensure that the area around the transformer remains clear to allow for proper heat dissipation.
- **Professional Check:** For any internal issues or complex repairs, contact a qualified electrician. Do not attempt to open the sealed internal components.

## 8. TROUBLESHOOTING

---

If you encounter issues with your transformer, refer to the following troubleshooting steps:

- **No Power to Lights:**

- Check the circuit breaker for the 120V AC input. Ensure it is in the ON position.
- Verify all wiring connections (input, output, and ground) are secure and correct.
- Inspect the low voltage wiring for any breaks or shorts.
- Ensure the connected lights are functioning correctly and are not faulty.

- **Lights are Dim or Flickering:**

- Check if the total wattage of connected lights exceeds the transformer's 100W capacity. Reduce the load if necessary.
- Verify the selected output voltage. For longer wire runs, consider using the 13V or 14V output to compensate for voltage drop.
- Inspect for loose connections or corroded terminals.

- **Transformer is Hot:**

- Ensure the transformer is not overloaded (total wattage of lights does not exceed 100W).
- Check for adequate ventilation around the transformer. Clear any obstructions.
- If overheating persists, disconnect power and contact customer support.

- **Unusual Noise (Humming/Buzzing):**

- A slight hum can be normal for some transformers. However, if the noise is excessive or new, disconnect power and check for loose internal components (only if safe and accessible, otherwise contact support).
- Ensure the mounting is secure and not vibrating against the wall.

If these steps do not resolve the issue, contact SURAIELEC customer support for further assistance.

## 9. WARRANTY AND SUPPORT

---

### 9.1 Warranty Information

The SURAIELEC 100W Pool Light Transformer comes with a **1-Year Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, misuse, accidents, or unauthorized modifications.

### 9.2 Customer Support

For technical assistance, warranty claims, or any questions regarding your SURAIELEC product, please contact our customer support team.

You can find more information and contact details by visiting the official SURAIELEC store:

[SURAIELEC Official Store on Amazon](#)