

# **LOW-VOLTAGE TRANSFORMER I N S T A L L A T I O N**

## **ATTENTION:**

**Please read this installation guide carefully to  
ensure safe and efficient operation of this Power  
Supply**



**WARNING - Risk of Electric Shock.** Install power unit 5 feet (1.5 m) or more from a pool, spa, or fountain. Where the power unit is installed (a) indoors within 10 feet (3.0 m) of a pool, spa, or fountain or (b) outdoors, connect power unit to a receptacle protected by a GFCI.”

**CAUTION: FOR USE ONLY ON A BRANCH CIRCUIT PROTECTED BY A CLASS A TYPE GROUND FAULT CIRCUIT INTERRUPTER**

**FOR USE WITH LANDSCAPE LIGHTING SYSTEMS ONLY**

**THIS DEVICE IS ACCEPTED AS A COMPONENT OF A LANDSCAPE LIGHTING SYSTEM WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY CSA OR LOCAL INSPECTION AUTHORITIES HAVING JURISDICTION**

**CAUTION: FOR USE ONLY ON A BRANCH CIRCUIT PROTECTED BY A CLASS A TYPE GROUND FAULT CIRCUIT INTERRUPTER**

**DO NOT CONNECT TWO OR MORE POWER SUPPLIES IN PARALLEL**

**DO NOT MOUNT POWER SUPPLY OR LUMINAIRES WITHIN 3 M OF A SWIMMING POOL OR SPA**

Specific instructions for mounting, proper wiring, grounding, and servicing. Type and minimum length of flexible cord or cable for connection to each secondary output circuit of the power supply. The supply circuit for the landscape lighting system shall be protected by a Class A type ground fault circuit interrupter, unless it is provided with the landscape lighting system. A cord-connect landscape lighting system shall not be used with an extension cord.

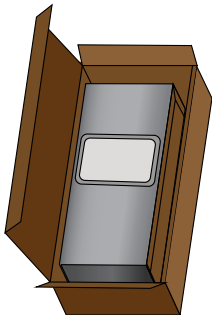
## SAFETY GUIDELINES

Low voltage installation and maintenance is safe and presents no risk for electric shock injury. However, there are regulations that may apply and that should be followed by installers. The following safety points may or may not be included in these regulations - the installer is responsible for ensuring a compliant installation.

- **WARNING- RISK OF SHOCK.** Install power unit at least 5 feet (1.5m) from pool or spa and at least 10 feet (3.05m) from a fountain.
- **WARNING-** install power unit in or on non-combustible materials only.
- Power supply must be connected (using supplied power cord) to GFCI-protected receptacle with an In-use cover.
- All power supplies are indoor and outdoor rated, but we recommend that the transformer be mounted outdoors. If mounting indoors, check for local electrical codes that may apply.
- Power supply must be mounted in a vertical orientation with the bottom plate at least 1 foot above the ground.
- In hot climates, avoid mounting in direct sunlight. Power unit will get hot regardless of climate. This is normal for operation.

Open the shipping carton and carefully remove the transformer, accessories, and hardware. Note that transformer mounting hardware is not included. Inspect contents for any damage that may have occurred during shipping.

**Mounting Hardware  
not included**



## DETERMINE THE LOAD

---

The general capacity should have been determined prior to purchasing the transformer. Circuit loads should not exceed 80% of capacity. As a general rule, total light fixture wattage should not exceed 80% of the transformer capacity. To determine the total wattage, simply add up the wattage of all fixture lamps. This number should be 20% less than the transformer's wattage capacity. If you are over capacity, your installation may require a secondary or larger transformer.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## DETERMINE WIRE GAUGE ---

On the right, there is a diagram to help you determine what size cable is needed for your lighting job.

**IMPORTANT!** Please note that we do not recommend any runs longer than 300 ft. for low voltage lighting.



# What gauge cable do I need in order to run my Landscape Lighting System?

Will you be using Halogen or LED fixtures?

HALOGEN

Is the length of your farthest run more than 100 feet?

NO YES

Is the length of your farthest run more than 200 feet?

NO YES

12/2 Gauge cable should be sufficient for your needs

10/2 Gauge cable should be sufficient for your needs

8/2 Gauge cable should be sufficient for your needs

BOTH

Is the length of your farthest run more than 100 feet?

NO YES

Is the length of your farthest run more than 200 feet?

NO YES

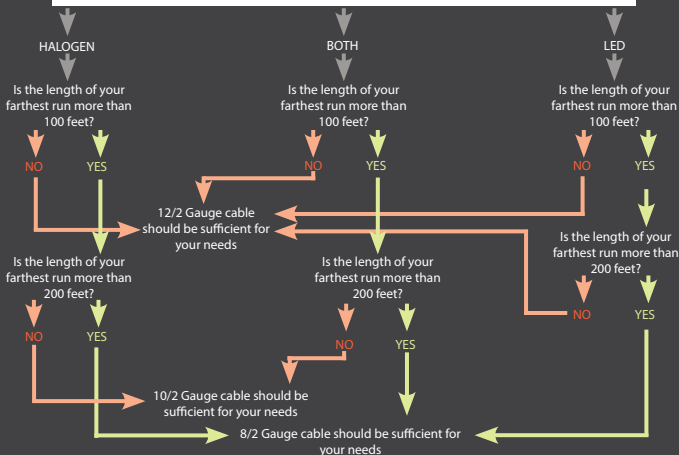
LED

Is the length of your farthest run more than 100 feet?

NO YES

Is the length of your farthest run more than 200 feet?

NO YES



## Ready to Install?

If you have already designed your system, and mounted your transformer, use the [Quick Start Guide Steps](#) starting on the next page.

## START HERE



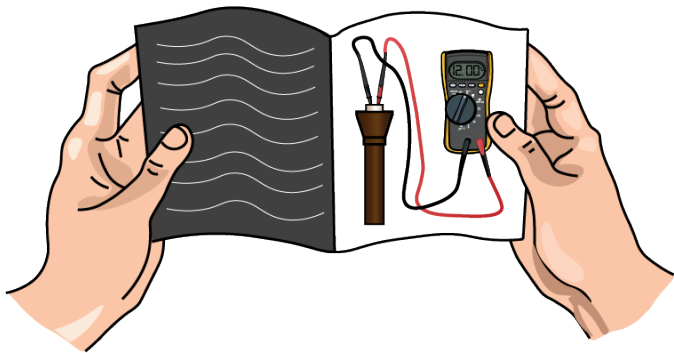
## **Quick Start Guide Steps**

1. Read the safety instructions and unpack the transformer.
2. Mount the transformer.
3. Run the wires from the transformer location to the fixtures or hubs.
4. Attach all the wires to the transformer terminals. For each paired wire, attach one side to a common terminal and the other side to the voltage terminal.
5. Check to ensure all of the connections are secure.
6. Plug in the transformer.
7. Flip the ON/OFF breaker switch upward to power on the transformer.
8. Check to ensure all the fixtures are on and functioning properly.
9. Measure the voltage at the fixtures or hubs.
10. If needed, use another voltage terminal (some transformers only have one).
11. Plug in one or both timers and or photocells
12. Set the timers to your desired function.
13. Close the transformer door using the locking mechanism to seal the unit from weather and debris.
14. At Dusk, make any last minute adjustments to the fixtures. Bury the wire only after the adjustments have been made.

## Quick Start Step 1

---

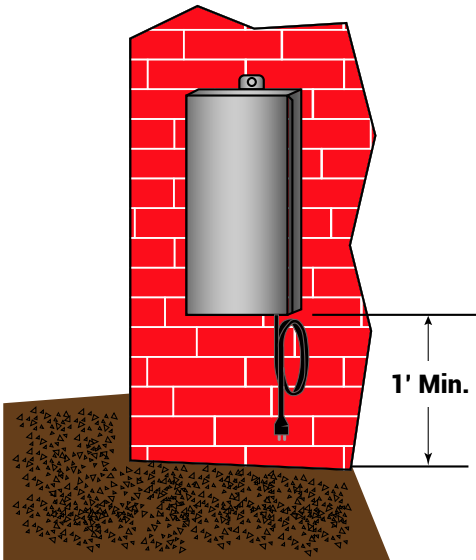
Read and understand the safety guidelines printed on the back of the front cover of this guide. If you have questions or need help, please consult a licensed electrician in your area for any issues requiring work on line voltage applications.



## Quick Start Step 2

---

Mount the transformer directly to the wall using the wall anchors to insure the transformer is secure. Be sure that you are within 5 feet of a GCFI protected outlet with an In-Use cover.

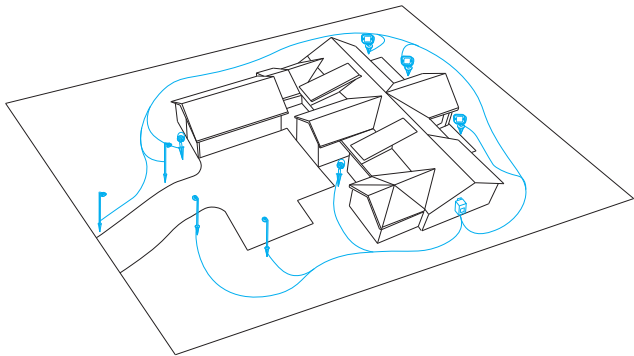


## **Quick Start Step 3**

---

With your plans or layout in hand, run the wires from the transformer to the hub and/or fixture locations. Leave extra wire to adjust the fixtures at night and achieve the desired effect.





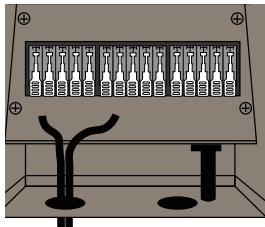
## **Quick Start Step 4** \_\_\_\_\_

Determine which fixtures are going on each circuit and that will determine which common you use for each wire.

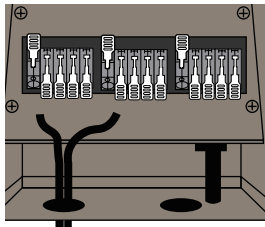
## **Quick Start Step 5** \_\_\_\_\_

Attach all of the wires to the transformer. Using the common and voltage terminals split each wire and fit one side into the common and one side into the desired voltage terminal (some transformers will only have one terminal).

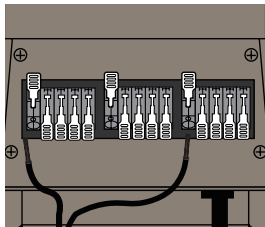
1. Feed the wire through the wire slots and into the transformer.
2. Flip up the easy connect lever, which will allow the wire entry.
3. Strip the lead ends of the wires to allow metal to metal contact within the connector.
4. Slide one side of the wire into the common terminal and one side into the voltage terminal, then clamp both levers down onto the wires. Check for a strong connection by firmly pulling on the wire.



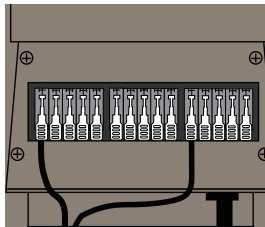
1



2



3



4

## **Quick Start Step 6**

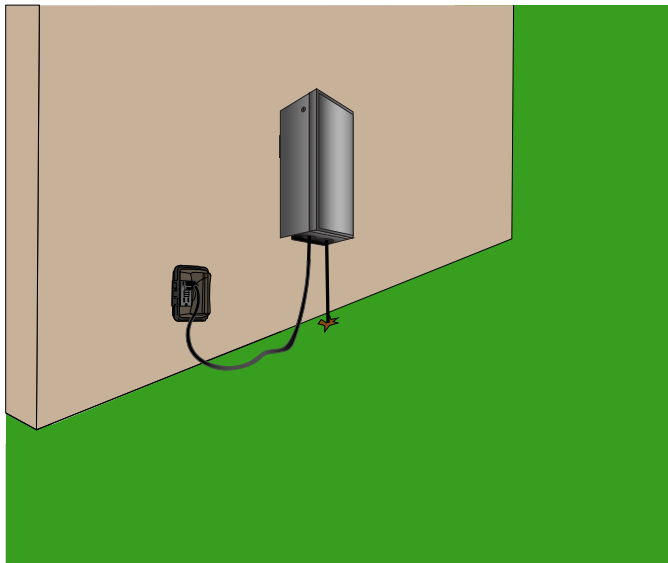
---

Plug in your transformer at a GFCI protected outlet with an In-Use cover.

## **Quick Start Step 7**

---

Flip the transformer's internal breakers upward to the on position to power on the unit.



**WARNING:** Disconnect power before changing timers or photocells.

## Quick Start Step 8

---

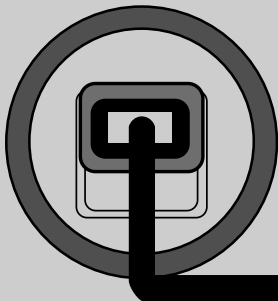
Check that your fixtures are on. If they are not on, check the transformer's internal breakers are on. For this test, make sure your timer and photocell are not connected, but that the loops for each are connected. Make sure that your transformer is plugged in and receiving power. If you aren't sure, check if the breaker for the GFCI outlet is on. For any line voltage issues, contact a licensed electrician.

## Quick Start Step 9

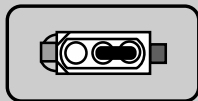
---

Be sure that all the fixtures are now functioning properly. Flickering or fixtures that aren't powered on could present a connection problem at the fixture or lamp. If a failed lamp is suspected, try replacing it with another that is working in a different location. This will help you to troubleshoot where the problem is.

TIMER LOOP



PHOTOCELL  
LOOP



## Quick Start Step 10

---

Using a volt meter, measure the voltage at the fixtures by removing the lamp and using the probes in the bulb receptacle. Be sure that all the other lamps are installed at the time of testing. For integrated fixtures, test voltage at the closest connection point to the lighting fixture. A good range is typically between 10.8 -15 volts for LED lighting fixtures.

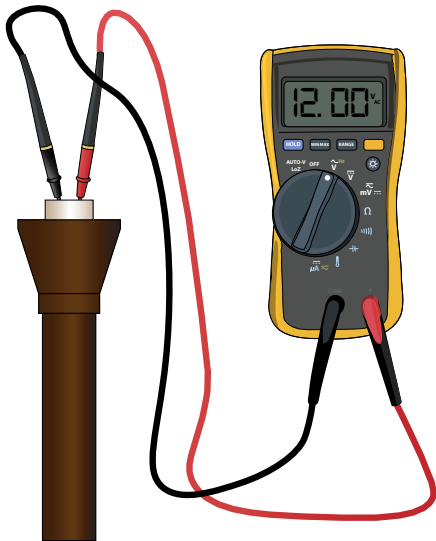
## Quick Start Step 11

---

If needed, you can adjust the fixture voltage by using a higher voltage at the transformer terminal.

**CAUTION:** When adjusting low voltage wires, be sure to unplug the transformer prior to switching terminals.





## Quick Start Step 12

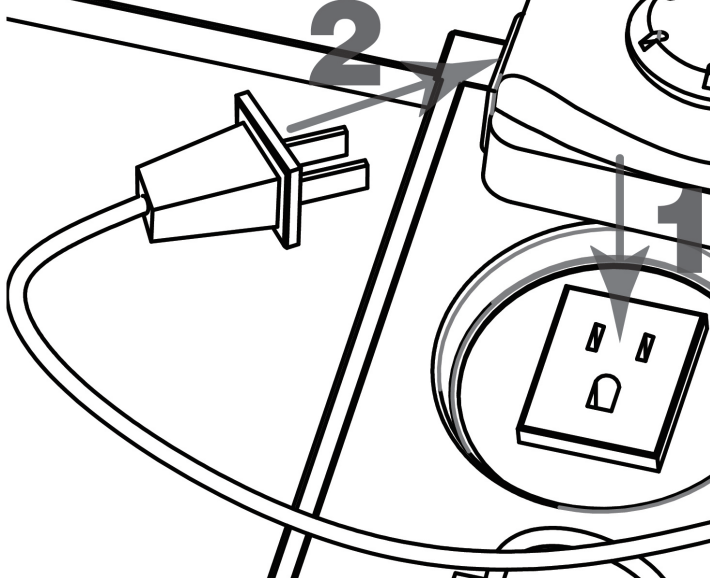
---

If you will be using timers and or photocells, gently pull out the jumper loops for each and insert the new unit (*STEP 1*). For timers, the plug for the loop needs to plug into the side of the new time (*STEP 2*). The photocells simply replace the jumper loops.

## Quick Start Step 13

---

Using the instructions provided with your timers, set them to your desired functions



## **Quick Start Step 14**

---

Close the transformer door ensuring a tight seal. Then sit back to admire your new landscape lighting system.



## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# **LOW-VOLTAGE TRANSFORMER I N S T A L L A T I O N**

## **ATTENTION:**

**Please read this installation guide carefully to  
ensure safe and efficient operation of this Power  
Supply**