



LUXOR - INSTALLATION

1. Luxor – Installing Luxor Transformer

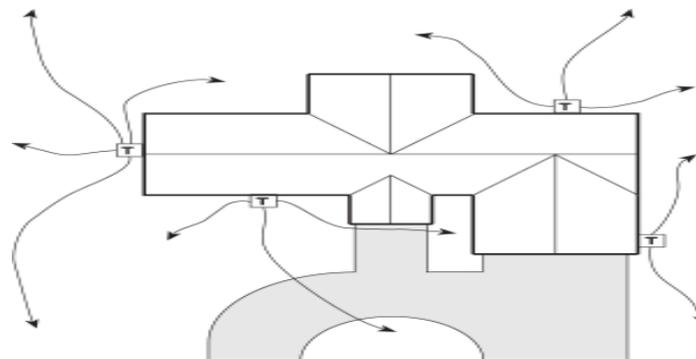
Locate transformer(s) in a well-ventilated area away from direct irrigation spray and central to where the majority of the lighting fixtures will be installed. The goal is to minimize the length of cable runs from your transformer to the lighting fixtures, which minimizes voltage drop and cable size.

Transformer(s) with power cords must be located adjacent to a 120 volt GFCI protected exterior electrical receptacle. If a 120-volt power source is not available at the desired transformer installation location, it is advised that you hire a licensed electrician to run a dedicated 120-volt, 15 amp circuit to the desired location.

Test all existing receptacles with both a receptacle tester and a digital voltmeter or amp clamp to verify proper wiring and voltage at the receptacle.

When using only one transformer, it is very important to center the transformer on the wattage load. If the project calls for 135 watts in both front and back yard, the LUXOR Series Transformer should be centered on the side of the house that will receive the most lighting. A common mistake is to locate the single transformer on the service side of the house or in the garage, which might result in excessively long cable runs to reach lighted areas. The primary goal in laying out low voltage systems is to minimize cable runs because of voltage.

NOTE: If LUXOR is to be connected to Wi-Fi router, consider location within Wi-Fi range.

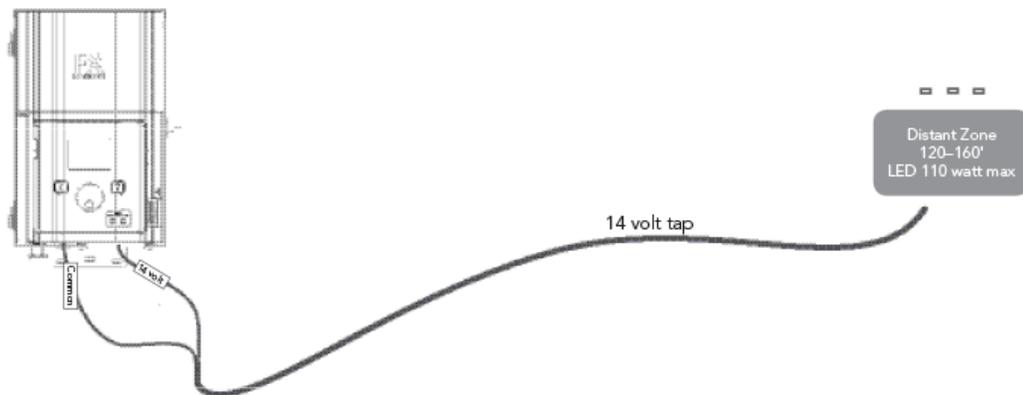


Sample diagram of home with transformer and lamp placement

2. Luxor – Running Cable to the Fixtures

Once the transformer has been installed and all fixture locations determined, the next step is to run the correct size cable from the transformer to the fixtures. LED fixtures should be provided between 10 and 15 volts AC. This is accomplished by:

1. Grouping fixtures into distance zones as illustrated below. Do not have a fixture that is 10' away from the transformer on the same cable run as one that is 100' away.
2. Use the proper cabling method for the application. Try to center load all cable runs when possible to minimize the voltage differential between fixtures.
3. Use the correct size cable to accommodate voltage drop. As a general rule of thumb, limit the wattage load per each cable run to no more than 100 to 160 watts.



Watts shown are per 12 gauge cable. Install additional cable runs as needed to complete project. To increase wattage maximum, run 8 gauge or double 12 gauge to the first fixture in the zone. Use a digital voltmeter to fine tune circuits.

Summary: For maximum light output and lamp life, each lamp should be provided with between 10 to 15 volts AC. To stay within a 0.5 to 1.0 volt differential between the first light and the last light on a given circuit (while LED lights can support several volts of difference, good design practice is to minimize the voltage difference), you must group the fixtures into distance zones and not overload the cable with excessive wattage. As a rule of thumb, limit the distance between the first fixture and the last fixture on any given run to no more than 50 feet.

Note: Assign all FX ZD fixtures a group number prior to installation. If you are installing the Wi-Fi module and using the LAM, the group numbers for fixtures can be assigned after installation.

LED WATTAGE EQUIVALENT CHART

Specifications	1LED	3LED	6LED	9LED	ZDC
Halogen Lumen Output Equivalent	10 watt	20 watt	35 watt	50 watt	20 watt
VA Total	2.4	4.5	13.5	13.5	11.0

Cable Stats

Low voltage lighting systems are typically installed using direct burial rated stranded cable. The most common cable used is referred to as 12/2 stranded cable. The size of cable used in wiring the lighting system will be determined by the wattage load and length of cable run from the transformer to the lighting fixtures. It is very important to note that all low voltage cable has a maximum rating. Overloading cable can create a dangerous safety hazard so be sure to cable your lighting system with the proper size cable.

Low Voltage Cable: Each low voltage lighting cable consists of two parts. One part of the cable is designated to carry the voltage load and is referred to as the Common lead. The Common section is installed into one of the low volt Common lug on the terminal block. The other section is referred to as the 14V lead and is installed into the lugs labeled 14V. Voltage is carried out from the transformer to the fixtures via the Common side of the cable and returns back to the transformer 14V tap via the other half of the cable, thus completing the circuit.

Cabling Methods

Within each cabling zone, you may utilize any of a number of cabling methods. The primary objective is to minimize voltage drop by installing the proper size feeder cable (home run) to each zone, and to make sure each fixture on each cable run is receiving between 10 and 15 volts. Center feeding the “home run” (the main cable run from the transformer to the first fixture on the circuit) will help minimize the voltage differential between the first fixture and the last fixture on the cable run.

Connecting Cables At The Terminal Block

Transformer terminal block – The LUXOR Series Transformer includes one Common lug, and one 14V lug.

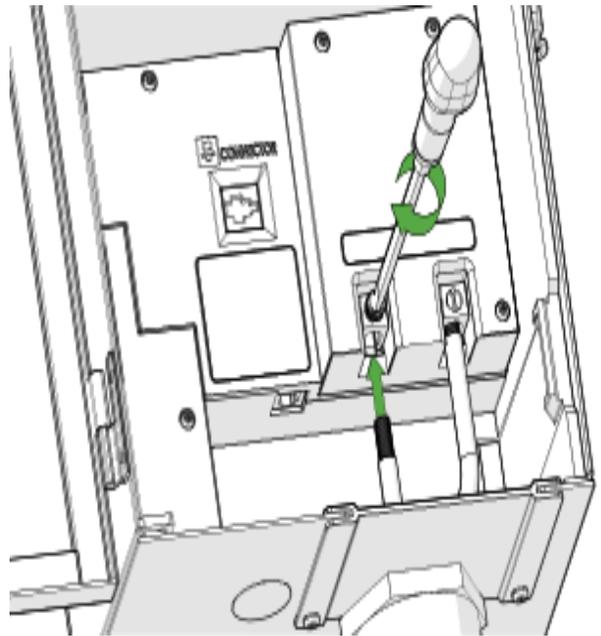
Common lugs – One conductor from each cable run coming from the lights to the transformer must be connected to one of the common lugs. The other conductor will be installed into the 14V hot lug.

Circuit overload – If the amperage load on any given common lug exceeds the transformer capacity the circuit breaker will trip and the display will read “Error Overload”. Test the amperage load on all cables on the common lug using an amp clamp. Test each individual cable on the common lug with the amp clamp. To remedy an overload, reduce the wattage of the system.

Short circuit – The LCD will read “Error Overload” and shut off power if there is a short somewhere in the cabling. This message will continue to be displayed until any button is pressed. To test for a short circuit, check each cable on the common lug.

Example: A circuit with 100 watts of load should have an amp reading of approximately 8 amps. If the cable is reading significantly more, it has a short somewhere in the cable.

Note: Shorts and overloads are NOT covered by the FX warranty and can only be detected when the transformer is tested in the field.

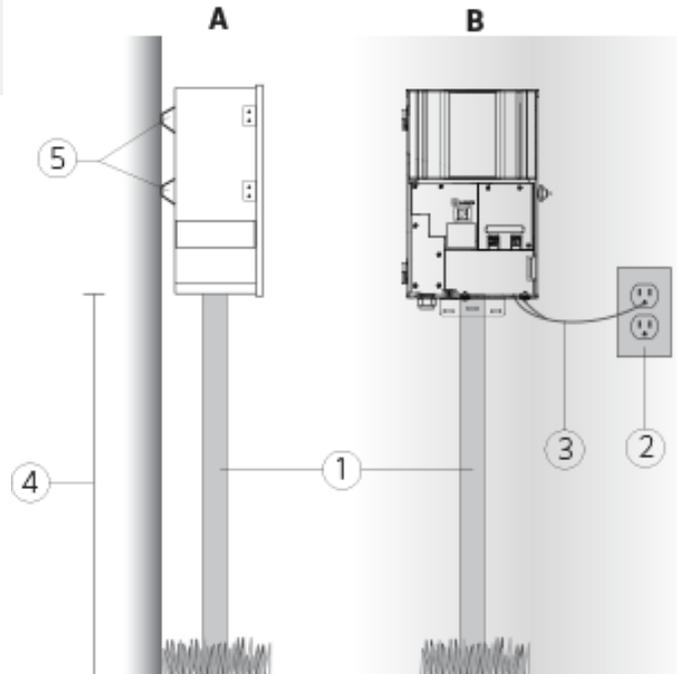


3. Luxor - Mounting Transformer

Wall Mount

By code, all transformers must be installed a minimum of 12" above finish grade as measured from finish grade to the bottom of the transformer. Drill pilot holes into mounting surface, insert anchors and install screws into anchors leaving approximately 1/8" of thread exposed on the screw. Mount transformer on screws.

Mark locations for bottom anchors with permanent marker. Remove transformer from wall. Drill bottom anchor holes and install anchors. Place transformer back on top of anchors and install screw(s) into anchors at bottom of transformer to secure it to the wall.



A - Side View

B - Front View

1. 1½" conduit
2. 120 volt receptacle with weatherproof cover
3. Power cord
4. 12" minimum
5. Mounting brackets

Post Mount

Install pressure treated 4" x 4" x 36" (min) post in concrete footing. Install single anchor screw 1 1/2"-2" below the top of post. Place transformer on screw. Once level, secure transformer to post by installing 1 or 2 screws on the bottom-mounting bracket.

A - Side View

B - Front View

1. 1 1/2" conduit
2. 4 x 4 post
3. Concrete footing
4. 12" minimum
5. Mounting brackets

