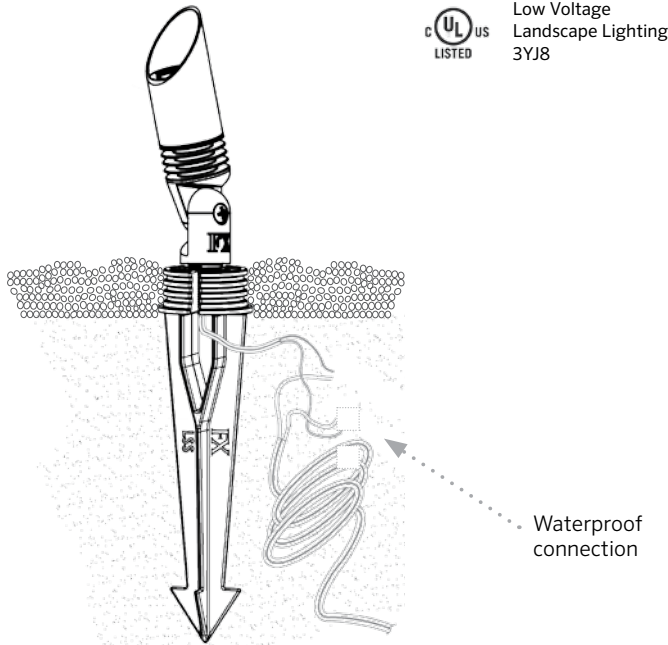
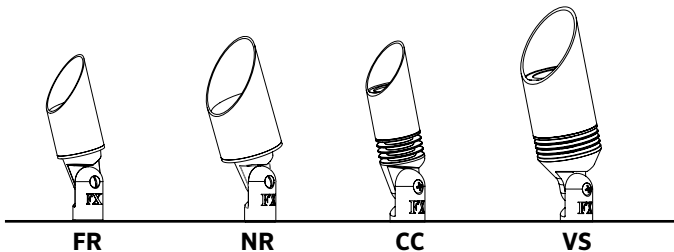


We have developed this series of field installation guidelines to assist you in correctly installing fixtures and transformers, ensuring customer satisfaction and trouble-free service. If you have any questions, please call your local distributor or the FX TechLine at 800-733-2823 before proceeding. Follow all NEC guidelines and local electrical codes. For more information, visit: fxl.com.

## TYPICAL INSTALLATION:



**THIS SET OF INSTRUCTIONS APPLIES TO THE FOLLOWING FIXTURES:**



## INSTALLATION GUIDELINES:

The FR, NR, CC, and VS models are integrated LED fixtures capable of housing various LED boards designed by FX Luminaire. The size of each fixture corresponds to the size of each compatible LED board. For example: FR (1LED, 3LED, and ZDC), NR (1LED, 3LED, 6LED, 9LED, and ZDC), CC (1LED, 3LED, and ZDC), and VS (1LED, 3LED, 6LED, 9LED, and ZDC).

### Installation Requirements

Install all four models in the upward facing direction only. Ensure the fixture is aligned in a manner such that the weep hole is pointed downward (not applicable on angled shrouds). Using the FR, NR, CC, or VS models as a down light may lead to failure.

### Changing or removing lenses

To add/remove a color filter, beam angle lens, or accessory lens, twist the lens cap back and forth while simultaneously pulling up. Once the lens cap is removed, twist the top lens 1/4 turn counterclockwise to release the bayonet lock and lift the lens(es) off. Repeat to remove multiple lenses. Once removed, reattach the new color and/or beam angle lens by lining up the bayonet mount and twisting clockwise 1/4 turn while gently pressing down. If using an accessory lens (e.g. hex baffle, spread lens, etc.), insert the lens into the back end of the shroud to mate with the glass lens. Reinstall the lens cap by firmly pressing it past the double O-rings and flush with main fixture.

### Servicing

The LED board in this product is designed to offer years of use without replacement. If a failure occurs, please contact your local FX distributor for replacement components.

### DO NOT EXCEED 15 VOLTS IN THIS FIXTURE

The LEDs in this product function ideally when the incoming voltage is between 10-15 volts (11-15 volts for ZDC). Voltages outside of this range may damage LEDs, shorten their life, and cause unsatisfactory performance. The use of improper voltage voids the product warranty. Use only a UL 1838 approved power supply.

## SAVE THESE INSTRUCTIONS:

### WARNING – To reduce the risk of FIRE OR INJURY TO PERSON:

- Turn off/unplug and allow to cool before replacing lamp.
- Lamp gets HOT quickly. Contact only switch/plug when turning on.
- Do not touch hot lens, guard, or enclosure.
- Keep lamp away from materials that may burn.
- Do not touch the lamp at any time. Use a soft cloth. Oil from skin may damage lamp.
- Do not operate the luminaire fitting with a missing or damaged shield.

### WARNING – Risk of Electric Shock

- Install all luminaires 10 feet (3.05 m) or more from a pool, spa, or fountain.
- A luminaire shall not use tungsten halogen lamps unless the luminaire is marked for such lamps.
- Supply connection and electrical components are located above ground level, except for secondary cord that is suitable for wet locations.

### LOW-VOLTAGE CABLE SHALL:

1. Be protected by routing in close proximity to the luminaire or fitting, or next to a building structure such as a house or deck.
2. Not be buried except for a maximum 6 inches (15.2 cm) in order to connect to the main low-voltage cable.
3. Have the length cut off so that it is connected to a connector within 6 inches (15.2 cm) from a building structure, a luminaire, or fitting.

## CONSERVEZ SOIGNEUSEMENT CES INSTRUCTIONS:

### AVERTISSEMENT – Pour réduire le risque D'INCENDIE OU DE BLESSURE:

- Éteignez/débranchez la lampe et laissez-la refroidir avant de la remplacer.
- La lampe devient rapidement BRÛLANTE. Ne touchez que l'interrupteur/ la prise lors de la mise sous tension.
- Ne touchez pas la lentille, le dispositif de sécurité ni le boîtier lorsqu'ils sont chauds.
- N'approchez pas la lampe de matériaux pouvant s'enflammer.
- Ne touchez jamais la lampe. Utilisez un chiffon doux.
- La graisse de la peau peut endommager la lampe.
- N'utilisez pas le raccord du luminaire si le bouclier est absent ou endommagé.

### AVERTISSEMENT – Risque d'électrocution

- Installez tous les luminaires à 3,05 m (10 pieds) ou plus d'une piscine, d'un spa ou d'une fontaine.
- Les luminaires ne doivent pas utiliser de lampes tungstène-halogène à moins que le luminaire soit prévu pour ce type de lampe.
- Le raccordement au réseau électrique et les différents matériels électriques doivent être installés au-dessus du niveau du sol, exception faite pour les fils ou réseaux secondaires qui conviennent aux lieux humides

### LE CÂBLE BASSE TENSION DEVRA:

1. Être protégé en le faisant passer à proximité du luminaire ou du raccord, ou à côté d'une construction comme une maison ou une terrasse.
2. Ne pas être enterré sauf à un maximum de 15,2 cm (6 pouces) pour être branché au câble basse tension principal.
3. Être raccourci de manière à être branché à un connecteur situé à moins de 15,2 cm (6 pouces) d'une construction, d'un luminaire ou d'un raccord.

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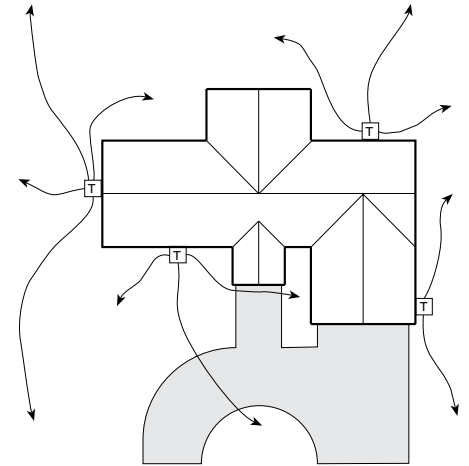
## TRANSFORMERS

### Single Transformer

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 yards, the 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 can result in excessively long cable runs to reach lighted areas. The primary goal in laying out low-voltage systems is to minimize cable runs due to voltage drop.

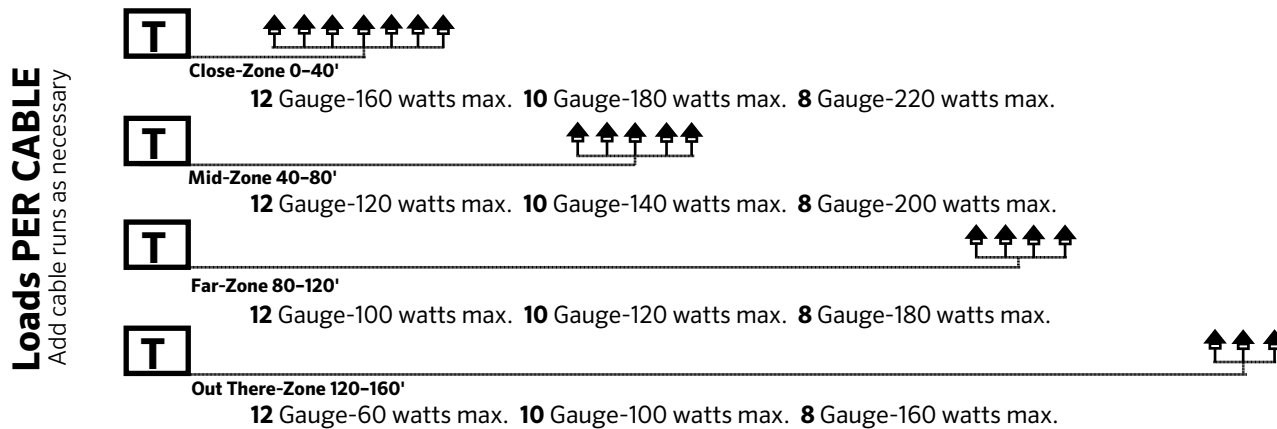
### Multiple Transformers

A common mistake in laying out multiple transformer circuits is to group several transformers in one location because of utility or visual considerations only. As with any low-voltage layout, the prime directive should be to locate the transformers as close to the fixtures as possible in order to minimize cable runs. The other multi-transformer layout consideration is “use zoning.” Having several transformers allows the client to selectively control light in separate areas. This approach is similar to irrigation design in that the goal is to individually control areas that have similar needs. In lighting, a recreation area has different lighting needs than does a front entry. Therefore, the lights that serve these different areas need to be on separate transformers and switch controls.



Sample diagram of home with transformer and lamp placement

## CIRCUITING GUIDELINES



## LED LIFE

- For maximum light output, tune lighting circuits to provide between 10 and 15 volts as measured at lamp terminals when all of the lamps on the circuit are operating.
- Voltage can be regulated by adjusting circuit load/run.
- To determine circuit voltage, use a digital voltmeter.

## CONNECTORS

- Connectors used to connect a luminaire or output circuit component to the main low-voltage cable shall be copper or copper alloy, or the equivalent.
- When installed, the connection shall guard against inadvertent shorting of current-carrying parts.
- Wire nuts are not to be used unless provided with corrosion protection, intended for outdoor use, and designed for direct burial.

**RISK OF FIRE WARNING: DO NOT USE FX FIXTURES WITH ANY STYLE OF TRANSFORMER THAT EXCEEDS 15 VOLTS ON THE SECONDARY.**