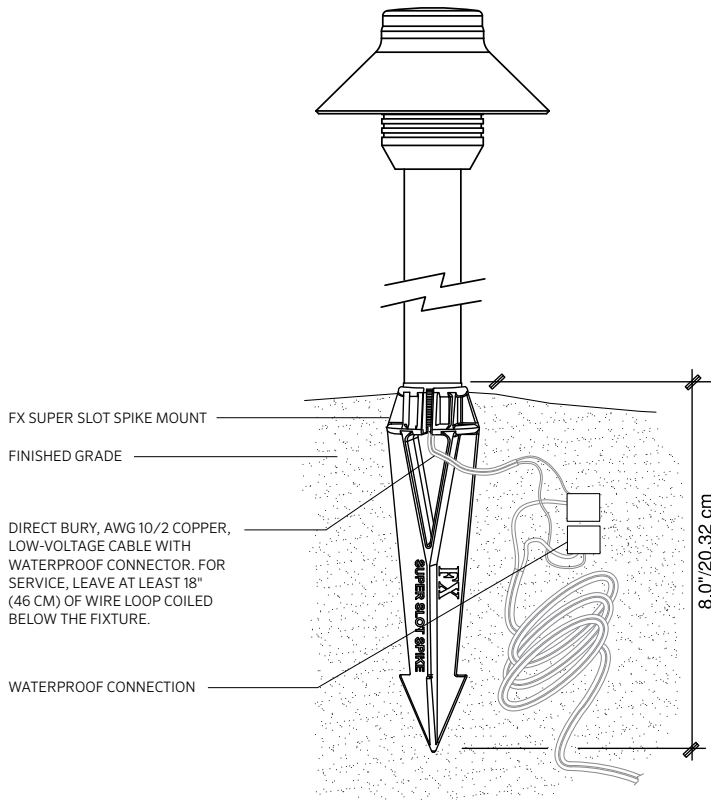


We have developed this series of field installation guidelines to help you correctly install fixtures and transformers, ensuring customer satisfaction and trouble-free service. If you have questions, please call your local distributor or the FX TechLine at 800-733-2823 before proceeding. Follow all NEC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

TYPICAL INSTALLATION:



INSTALLATION GUIDELINES:

DO NOT EXCEED 20 WATTS IN THIS FIXTURE

To relamp, twist the top assembly back and forth, and remove it by pulling outward. Do not touch a halogen (if applicable) lamp bud with your fingers, as this will shorten the lamp life. Clean the lamp with a cloth and alcohol if your hands touch the lamp. For an LED or halogen lamp, firmly press the bi-pins into the socket until the lamp snaps into place. Reinstall the top assembly by setting it on the housing at an angle. Then twist and push down as if it were threaded. Some fixtures have a threaded connection, so please remember to service them accordingly. The inside of the cap can be lubricated to ease installation. To minimize clean-up, keep the plastic shipping bag on the fixture until just before system testing.

For predictable, high-performance lamp life, supply the LED fixture with 10 to 15 volts, per the lamp manufacturer's requirements. For halogen lamps, supply 11.0 to 11.5 volts. FX Luminaire will not warranty or replace any components used with a non-UL 1838 power supply. The use of inferior power supplies can cause premature lamp failure and other problems, including the risk of fire.

THESE INSTRUCTIONS APPLY TO THE FOLLOWING FIXTURES:

SP/AP	PF	SC	BP	PR
DP	DS	TM	AN/DL	DM
GN	CA	CB	CV	PV
DR	PL	C-PL-4	C-PL-7	

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

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.

We have developed this series of field installation guidelines to help you correctly install fixtures and transformers, ensuring customer satisfaction and trouble-free service. If you have 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.

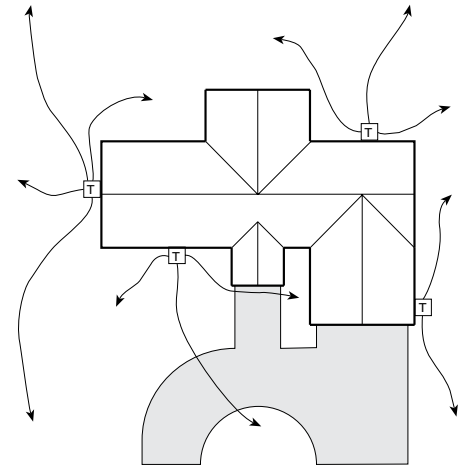
TRANSFORMERS

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 the 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 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 drop.

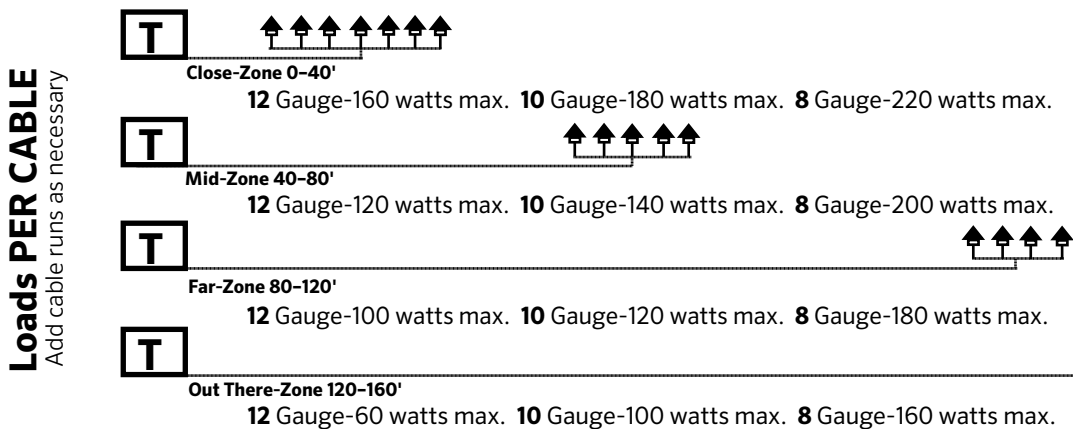
Multiple Transformers

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 a front entry. Therefore, the lights that serve these different lighting use areas need to be on separate transformers and switch controls.



Sample diagram of home with transformer and lamp placement

CIRCUITING GUIDELINES



LAMP LIFE

- For maximum light output, tune lighting circuits to provide between 11.5 and 12.0 volts as measured at lamp terminals when all of the lamps on the circuit are operating.
- For longer lamp life, adjust voltage down so lamps receive between 10.5 and 11.5 volts at the lamp terminals.

Volts at Lamp	Lamp Life of Rated	Lumen Output of Rated
13.0*	50%	350%
12.5*	75%	175%
12.0	100%	100%
11.5	200%	80%
11.0	300%	75%
10.5	500%	65%
10.0	900%	50%

* This voltage is not recommended