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

**PRODUCT DRAWINGS:**

**INSTALLATION GUIDELINES:**

The QZ and QB fixtures are smaller, integrated LED fixtures capable of housing a 1-LED board only.

**Changing or removing the color and beam adjustment lenses:**
To remove, add, or change a color or beam angle lens, twist the lens cap back and forth while simultaneously pulling up. Once the lens cap is removed, twist the top lens ¼ turn counterclockwise to release the bayonet lock and lift the lens(es) off. Repeat to remove multiple lenses (QZ only). Once removed, reattach the new color and/or beam angle lens by lining up the bayonet mount and twisting clockwise ¼ turn while gently pressing down. Reinstall the lens cap by firmly pressing it past the double O-rings and flush with main fixture.

The LED board in this product is designed to offer years of use without replacement. Should you have a need to replace the LED board, please contact your local FX distributor.

The QZ and QB fixtures are designed to be used as up lights only. Using the QZ and QB as a down light may cause failure.

**DO NOT EXCEED 15 VOLTS IN THIS FIXTURE**
The LEDs in this product function ideally when the incoming voltage is between 10-15 volts. 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.

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

**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.

**SAVE THESE INSTRUCTIONS:**

**CONSERVEZ SOIGNEUSEMENT CES INSTRUCTIONS:**
INSTALL NOTES: SYSTEM LAYOUT

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

### CIRCUITING GUIDELINES

**Loads PER CABLE**

Add cable runs as necessary

<table>
<thead>
<tr>
<th>Zone</th>
<th>12 Gauge</th>
<th>10 Gauge</th>
<th>8 Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close-Zone 0–40'</td>
<td>160 watts max.</td>
<td>180 watts max.</td>
<td>220 watts max.</td>
</tr>
<tr>
<td>Mid-Zone 40–80'</td>
<td>120 watts max.</td>
<td>140 watts max.</td>
<td>200 watts max.</td>
</tr>
<tr>
<td>Far-Zone 80–120'</td>
<td>100 watts max.</td>
<td>120 watts max.</td>
<td>180 watts max.</td>
</tr>
<tr>
<td>Out There-Zone 120–160'</td>
<td>60 watts max.</td>
<td>100 watts max.</td>
<td>160 watts max.</td>
</tr>
</tbody>
</table>

**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.

* This voltage is not recommended