Low Voltage Power Module
Installation & Instruction Manual

!!! NOTICE !!!

Please read and understand thoroughly this installation guide to ensure safe and efficient operation of this Power Module. Save this information for future reference.

Mounting Power Module

1. Remove the transformer from the shipping carton
2. Mount the transformer to a solid surface; utilize the keyhole slots in the mounting bracket. (NOTE: THE TRANSFORMER MUST BE MOUNTED AT LEAST 12” ABOVE GROUND LEVEL WITH THE WIRE TERMINALS FACING DOWN).
3. Secure the transformer using the appropriate wall anchors for the wall surface used.

Determine The Load

Our Multi-Tap transformers are equipped with secondary circuit breakers that are connected to the COM (commons). Each circuit can be loaded up to a maximum of 300 watts.

1. Add up your fixtures wattage. Divide your load into 300w maximum per circuit.
2. Refer to the chart below to select cable for circuit.

<table>
<thead>
<tr>
<th>Cable</th>
<th>Rated Amps (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/2</td>
<td>25 amps</td>
</tr>
<tr>
<td>10/2</td>
<td>30 amps</td>
</tr>
<tr>
<td>8/2</td>
<td>40 amps</td>
</tr>
</tbody>
</table>

Important! - If you exceed these usage ratings there is a high probability that you will overload the cable, transformer, source circuit breaker or all of the previous stated!

3. Measure the approximate distance from the transformer to the first fixture on each run. You can calculate the cable losses according to the following voltage drop formula.

\[
\text{Cable Voltage Drop} = \left( \frac{\text{Cable Length} \times \text{Cable Watts}}{\text{Cable Constant}} \right) \times 2
\]

<table>
<thead>
<tr>
<th>Cable</th>
<th>12/2</th>
<th>10/2</th>
<th>8/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Constant</td>
<td>7500</td>
<td>11920</td>
<td>18960</td>
</tr>
</tbody>
</table>

Important! – Formulas take into account cable loss, voltage loss and in-rush current.

4. You can according to the voltage loss select the tap that you can use. You may use one, two, three or all taps at once.
**Connecting the Cables:**

1. Open the door and remove for ease of access.
2. Run lighting cables through knockouts in bottom plate.
3. Connect the low voltage cables to the COM's and low voltage taps labeled on the terminal blocks. *(Note: One wire of each cable must be connected to the common terminal.)*
4. Make sure that all connecting screws are secure and tight.
5. Turn off all the circuit breakers in the transformer unit. Plug the 120volt line cord into a grounded 120 volt receptacle. Turn on one breaker at a time to ensure that are not any short circuits.

**Checking Lamp Voltages, Output Amps and Input Amps**

It is highly recommended to use an amp probe on the primary side and an amp/voltage meter on the secondary side to your check your output.

1. Check the voltage at each fixture using a true RMS voltmeter, and make sure you have the proper voltage to each lamp. The lamp optimum voltage range is 10.8 to 12 volts.
2. Use a clamp-on amp meter to check output current on the low voltage cable at the transformer and be sure not to exceed 25 amps per circuit and not to exceed the cable rating.
3. Use a clamp-on amp meter around the looped wire to measure the input current and sure not to exceed the maximum input current. The transformer is marked with a label showing the maximum input current.

<table>
<thead>
<tr>
<th>Size</th>
<th>150W</th>
<th>300W</th>
<th>600W</th>
<th>900W</th>
<th>1200W</th>
<th>1500W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Amps</td>
<td>1.25A</td>
<td>2.5A</td>
<td>5A</td>
<td>7.5A</td>
<td>10A</td>
<td>12.5A</td>
</tr>
</tbody>
</table>

4. Close the door.