SAFETY & WARNINGS

1. Unlike traditional dimming controls, SWITCHEX requires unique wiring steps. Read all warnings and installation instructions thoroughly.
2. Install in accordance with national and local electrical code regulations.
3. This product is intended to be installed and serviced by a qualified, licensed electrician.
4. NEC Code 725.136: Class 1 and Class 2 circuits in same enclosure must be separated by a barrier unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits.
5. Only install compatible 12 V or 24 V Constant Voltage DC fixtures or warranty will be void.
6. Do not modify product beyond instructions or warranty will be void.

APPROVED LED FIXTURES

SWITCHEX is compatible with Diode LED solid color 12V and 24V tape light and fixtures, including but not limited to:

- AVENUE 24™
- BLAZE™
- DOUBLE BLAZE™
- FLUID VIEW®
- HYDROLUME™
- HYDROLUME PLUS™
- ULTRA BLAZE™
- ULTRALIGHT™

* Not compatible with Amber, Red, & Green tape lights
** Includes SPOTMOD TILE & LINK Series (DI-SPOT-TL** & DI-SPOT-LK**) 
*** Not compatible with Yellow, Red, & Green modules

INSTALLATION

1. TURN POWER OFF AT CIRCUIT BREAKER

   SHOCK HAZARD! May result in serious injury or death. Turn power OFF at circuit breaker prior to installation.

2. DETERMINE LOCATION TO INSTALL COMPONENTS

3. REMOVE EXISTING SWITCH (IF NECESSARY)
   a. Remove trim plate and switch mounting screws.
   b. Pull switch from wall.
   c. Identify wires connected to switch and mark wires if desired.
   d. Disconnect wires from switch.
INSTALLATION CONT.

4 CHOOSE FACE PLATE FINISH (IF NECESSARY)

- Gently squeeze top and bottom of face plate.
- Lift face plate from housing.
- Insert replacement face plate into top housing groove. Position housing slider and face plate slider at min brightness (bottom level) and pop on face plate.

5 REMOVING FINS (IF NECESSARY)

It’s required to break off dimmer fins when ganging multiple dimmers in same wall box.

- Grip with pliers. Bend back and forth until fin breaks off.
- Fins have been removed.

6 ATTACH VOLTAGE PARTITION (BARRIER)

A voltage barrier is provided, which separates high voltage and low voltage wires in the wall box. Attach before mounting.

NEC CODE 725.136

Class 1 and Class 2 circuits in same enclosure must be separated by a barrier unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits. For example, Non-Metallic (NM) cable is considered a Class 1 circuit conductor. Therefore, if both high voltage and low voltage circuits are installed with NM cable then the voltage barrier is not required for installation.

7 WIRE DIMMER

SPECIAL WIRING INSTRUCTIONS!
SWITCHEX requires unique wiring steps. Read thoroughly.

- Strip wires on dimmer.
  - 7/16 in. (11 mm)
- Wire dimmer. Ensure main power is OFF.
  - GND (GREEN): To ground wire in box.
  - V+ (RED): To low voltage V+.
  - V− (BLUE): To low voltage V−.
  - N (WHITE): To 120 V Neutral.
  - H (BLACK): To 120 V Line Hot.

Install gang boxes that include vertical partitions (available at local electrical distributor) unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits.
INSTALLATION CONT.

7 CONTINUED.

VOLTAGE DROP
See VOLTAGE DROP CHARTS at end of this guide for wire gauge recommendations installed between dimmer and fixture.

SYSTEM DIAGRAM

8 MOUNT DIMMER TO WALLBOX AND ATTACH TRIM PLATE

9 TURN POWER ON AT THE CIRCUIT BREAKER

SYSTEM WORKING IMPROPERLY?
Turn power OFF at circuit breaker and verify all connections. Review WIRING and TROUBLESHOOTING or call Diode LED Technical Support at 877.817.6028.

OPERATION

TRoubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Common Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixture does not illuminate</td>
<td>• Incorrect wiring. Polarity of Low Voltage V+ and V− are reversed.</td>
</tr>
<tr>
<td></td>
<td>• Circuit breaker is OFF or tripped.</td>
</tr>
<tr>
<td></td>
<td>• Incorrect voltage pairing of dimmer and fixture. 12 V dimmer models will not power a fixture with a higher voltage rating.</td>
</tr>
<tr>
<td></td>
<td>• Different fixtures do not dim in sync.</td>
</tr>
<tr>
<td></td>
<td>• Fixture turns off at low dim level.</td>
</tr>
<tr>
<td></td>
<td>• Fixture strobes/flickers at low dim level.</td>
</tr>
<tr>
<td></td>
<td>• Dimmer buzzes excessively</td>
</tr>
<tr>
<td></td>
<td>• Only install 12 V or 24 VDC tape lights on the compatibility list.</td>
</tr>
<tr>
<td>Fixture heats up excessively</td>
<td>• Incorrect voltage pairing of dimmer and fixture. Do not attach a 12V fixture to a 24V dimmer.</td>
</tr>
<tr>
<td></td>
<td>• Fixture is not compatible.</td>
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</tbody>
</table>
VOLTAGE DROP CHARTS

For best performance and lumen output, ensure proper wire gauge is installed to compensate for voltage drop of low voltage circuits.

Example: 12V Voltage Drop & Wire Length Distance Chart

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>10 W</th>
<th>20 W</th>
<th>30 W</th>
<th>40 W</th>
<th>50 W</th>
<th>60 W</th>
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<tbody>
<tr>
<td></td>
<td>.83 A</td>
<td>1.7 A</td>
<td>2.5 A</td>
<td>3.3 A</td>
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<tr>
<td>18 AWG</td>
<td>34 ft.</td>
<td>17 ft.</td>
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<td>8 ft.</td>
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<tr>
<td>16 AWG</td>
<td>54 ft.</td>
<td>27 ft.</td>
<td>18 ft.</td>
<td>13 ft.</td>
<td>10 ft.</td>
<td>9 ft.</td>
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<tr>
<td>14 AWG</td>
<td>86 ft.</td>
<td>43 ft.</td>
<td>29 ft.</td>
<td>21 ft.</td>
<td>17 ft.</td>
<td>14 ft.</td>
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<tr>
<td>12 AWG</td>
<td>134 ft.</td>
<td>68 ft.</td>
<td>45 ft.</td>
<td>34 ft.</td>
<td>27 ft.</td>
<td>22 ft.</td>
</tr>
<tr>
<td>10 AWG</td>
<td>199 ft.</td>
<td>99 ft.</td>
<td>66 ft.</td>
<td>49 ft.</td>
<td>39 ft.</td>
<td>33 ft.</td>
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1. Determine load size. Let’s assume load is 55 W. Round up to nearest load.
2. Determine distance from SWITCHEX to load. Let’s assume the distance is 20 ft.
3. It’s recommended to install 12 AWG to eliminate excess voltage drop.

12V Voltage Drop & Wire Length Distance Chart

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VOLTAGE ADJUSTMENT

SWITCHEX can provide a 1V boost if the fixture is receiving noticeable light degradation.

a. Pop off face plate as shown in Step 4 of INSTALLATION.
b. Use a small screwdriver to adjust output voltage by turning adjustment dial clockwise.