AC Dimmable Electronic LED Power Supply
0-30 Watts Max | Model: DIM12V30

This electronic solid-state power supply is designed to work best with Reverse Phase or Trailing Edge dimmers, also known as ELV or Electronic Low Voltage dimmers. Select Universal Forward Phase dimmer models listed on page 3 of this data sheet are also compatible. Not for use with RGB LEDs.

- Delivers highly efficient, stabilized 12V DC power. No minimum load required, optimized for low voltage lighting, 0-30 watts max.
- Automatic shut-off in case of lighting overload, open circuit, short circuit, over temperature or other fault. Power supply will automatically restart after the fault has been corrected.
- Uses soft start technology for better instant on lighting starts.
- High power factor >98% for greater efficiency and energy savings.
- Isolated output power per NEC and UL safety requirements. ETL listed, conforms to UL standard 2108. Certified to Canada/CSA standard C22.2 No. 223-M91.
- FCC Part 15 compliant for commercial and residential applications.

Power supply is for direct wire only and includes NEMA approved metal enclosure with eight (8) 7/8" knockouts to meet various installation needs. A ground wire is attached with lug and nut to the inside of the enclosure. Wire nuts are also included. Because power supply is Class 2 rated driver, the LED load can be changed/connected while the driver is installed and powered.

Input voltage......................................................... 120V AC, 50/60Hz
Output voltage........................................................ 12V DC, 2.5A Max
Power factor.............................................................. >98%
Efficiency ................................................................. >85%
Enclosure material.................................................. Metal
IP protection............................................................ IP60, dry location only
Weight........................................................................... 14 oz.
Input cables.................................................. 8", 18AWG stranded, 3/8" tinned
Output cables.................................................. 8", 18AWG stranded, 3/8" tinned

Limited 1-year warranty. Failure to use this power supply for its intended purpose or improper installation will void warranty. Questions? Email support@armacostlighting.com.
Compatible Reverse Phase ELV Dimmers

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Armacost Lighting AC dimmable electronic solid-state power supplies are designed to work best with Reverse Phase ELV type dimmers. Tested to be compatible with the Electronic Low Voltage (ELV) dimmers shown here. Do not use standard Forward Phase dimmer models with this power supply.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Series Style</th>
<th>Model</th>
<th>Type</th>
<th>Max Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutron</td>
<td>Skylark</td>
<td>SELV-300P-XX*</td>
<td>Single Pole</td>
<td>300W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Skylark</td>
<td>SELV-303P-XX</td>
<td>Single or 3-Way</td>
<td>300W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Skylark Contour</td>
<td>CTELV-303PR-XX</td>
<td>Single or 3-Way</td>
<td>300W</td>
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<tr>
<td>Lutron</td>
<td>Diva</td>
<td>DVELV-300P-XX</td>
<td>Single Pole</td>
<td>300W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Diva</td>
<td>DVELV-303P-XX</td>
<td>Single or 3-Way</td>
<td>300W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Nova</td>
<td>NTELV-300-XX</td>
<td>Single Pole</td>
<td>300W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Nova</td>
<td>NTELV-600-XX</td>
<td>Single Pole</td>
<td>600W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Maestro</td>
<td>MAELV-600-XX</td>
<td>Digital Multi-Location</td>
<td>600W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Maestro</td>
<td>MRF2-6ELV-120-XX</td>
<td>Digital Wireless Option</td>
<td>600W</td>
</tr>
</tbody>
</table>

*XX denotes dimmer color

Reverse Phase ELV, or Electronic Low Voltage, type dimmers do not operate on 12V low voltage; ELV comes from the advanced circuitry needed within the AC dimmer to control electronic low voltage power supplies. ELV dimmers are better at handling inrush current and can help prolong the life of this power supply.

- ELV dimmers are very responsive and provide extremely smooth, flicker-free dimming control
- ELV dimmers require no real “trim” adjustments on the lower brightness setting. Thus, the dimming range may be perceived as a bit limited (15-100%). Maestro digital dimmers do feature low end trim adjustments
- Never any flicker or shimmer, no pop-on or drop-out
- At lowest level brightness setting, LEDs still remain “on,” providing some level of light output
- ELV dimmer performance is the brightest when at 100% (unlike almost all other dimmers which take away or limit some light output at full brightness)
- Can be more expensive than standard dimmers, not all models are readily available in stores and must be purchased online

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**Wiring Diagram**

- **Green Wire**
  - Ground
- **Black Wire**
  - 120V AC
  - Live HOT
- **White Wire**
  - 120V AC
  - Neutral
- **Red/White Wire**
  - Use for a 3-way switch connection

**Dimensions:** 4.2" L x 1.8" W x 1" H

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Compatible Forward Phase Universal Dimmers
AC Dimmable Electronic LED Power Supply | 0-30 Watts Max | Model: DIM12V30

- Lutron Dimmer
  - Skylark C•L Model SCL-153P 3-way shown.
  - All C•L dimmers are configured for single pole or 3-way operation

Wiring Diagram

- Green Wire: Ground
- Red/White Wire: Use for a 3-way switch connection
- Black Wire: 120V AC Live HOT
- White Wire: 120V AC Neutral

Although the dimmers listed below use Forward Phase control, they have been specially engineered to work with CFL and LED bulbs to reduce or eliminate many of the problems seen with brightness control when using this standard dimming technology. Referred to as Universal dimmers, they work with Armacost Lighting AC Dimmable Electronic Power Supplies and are less expensive than ELV dimmers. They are readily available at major home improvement stores. Do not use any other Forward Phase dimmers other than what is shown below.

Of the Forward Phase dimmers tested, Armacost Lighting recommends Maestro digital dimmers, models MACL-153M or MRF2-6ND-120. Except for losing some top end brightness at the 100% setting, these dimmers performed as smooth as Reverse Phase ELV dimmers.

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<tr>
<td>Leviton</td>
<td>Decora SureSlide</td>
<td>6674-P0W</td>
<td>Single or 3-Way</td>
<td>150W</td>
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<tr>
<td>Leviton</td>
<td>Decora IllumaTech</td>
<td>R50-IPLO</td>
<td>Single or 3-Way</td>
<td>150W</td>
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<td>Lutron</td>
<td>Ariadni C•L</td>
<td>AYCL-153P-XX*</td>
<td>Single or 3-Way</td>
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<td>SCL-153P-XX</td>
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<tr>
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<td>Skylark Contour</td>
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<td>Single or 3-Way</td>
<td>150W</td>
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<tr>
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<td>Diva C•L</td>
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<tr>
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<td>Maestro C•L</td>
<td>MACL-153M-XX</td>
<td>Digital Multi-Location</td>
<td>150W</td>
</tr>
<tr>
<td>Lutron</td>
<td>Maestro</td>
<td>MRF2-6ND-120-XX</td>
<td>Digital Wireless Option</td>
<td>150W</td>
</tr>
</tbody>
</table>

*XX denotes dimmer color

- Low cost and often can be purchased locally at many home improvement stores
- Dimmers feature methods to adjust or “trim” the dimming range to eliminate flicker or shimmer when dimmed very low, and/or to adjust the brightness to be just above the level at which the LED light cuts out when dimmed. This can create a broader range of perceived dimming
- Forward Phase dimmers can be load sensitive, the dimming range could be reduced if the total watts is less than 25% of the rated capacity of the power supplies
- To some extent, some Forward Phase dimmers will not allow LEDs to achieve full brightness. Depending on the dimmer, LED load, and other conditions, overall light output may be reduced by between 3-10%. This is a typical benefit of all eco-style dimmers and will extend LED life and save energy
- Not quite as smooth as ELV Reverse Phase dimmers; can be perceived as more of a “stepped”-style dimming
- More susceptible to occasional AC line noise which could cause some flicker or shimmer to LEDs when set at certain lower levels of lighting. Perception of issue depends on local conditions and may be temporary and/or may not be perceived by an individual’s eyes

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