



# LED 6 Amp PWM Dimmer

## CL-KR6-DIM Instructions

### Four-wire PWM dimmer for 12-volt DC LED lighting

Thanks for purchasing our best selling PWM dimmer. Leading LED experts, including the Rensselaer Polytechnic Institute, agree that pulse width modulation (PWM) is the best way to dim LED lighting.

#### Features and Specifications

KR6 is both a toggle On/Off switch, and full range dimming for LED lighting in one rotary control. It is easy to use and ADA compliant with both physical and audible click between the on and off positions.

- For use with 12-volt DC LED lighting systems 6 amps or less.
- Input voltage: 12 volts (9-20v DC range)
- Efficiency is greater than 98%.
- Heat sink: max temperature rise under full load is about 40F (22C) above ambient.

Note: Use of this dimmer with electric appliances or fluorescent lighting is not recommended and damage may result. The KR6 should not be used to control electric motors.

Creative Lighting Solutions strongly recommends that all electrical work be performed by a licensed and bonded electrician. Our warranty does not cover damage which may result from improper or unsafe installation.

#### Installation

The KR6 Panel mount dimmer must be installed between a 12-volt DC power supply and the first LED light or lighting fixture in the chain. Line voltage of 120v or 230v AC should be connected to a UL listed transformer, which has an output of 12-volts DC (Direct Current)

1. As always, disconnect the power being fed to the wiring you will be connecting to before beginning any installation. Install on a fuse or breaker which is 7A or less.
2. The wiring from the transformer (or 12v DC power source) should be stripped and trimmed to 1/2". Open the wire block clamps on the "IN" side by turning the small screws clockwise. Insert wires into correct positive and negative sockets and re-tighten the clamps by turning counter-clockwise. Output wiring should be connected to the block in the same manner. The output pair from the dimmer can be connected to either the pigtail connector (which comes with our AP20/ AP40) or 18 gauge wiring which will run to the first fixture of your system. With all low voltage systems it is best not to exceed 80-feet in total distance from the power supply to the last light of your chain. The voltage drop from runs longer than 80 feet may result in the last lights of your chain appearing dimmer than the rest (see "Tips" section for more info). Do not ground the negative lead to metal frames in between the dimmer and lighting, aberrant operation may result.
3. The 12-volt output of the transformer is then connected to the KR6 dimmer which uses conventional color coding (Red = positive Black = negative). The wiring pair which must be connected to the power source is the top pair, labeled "To Battery, 4A Max"
4. Depending on how your dimmer is situated, you may remove the black knob. Drill a 1/4" hole in the panel you will be mounting on. Position the dimmer in the hole and reattach the knob.

#### Tips

- Avoid long runs of 12-volt power since voltage drop may result.
- You may consider placing the power supply and dimmer after a standard 11 Ov wall switch. This can avoid a long run of 12-volt wiring and is especially good in semi-public environments like lobbies and restaurants where a visible dimmer switch may be tempting to people who will readjust your lighting levels for you.
- Polarity of installation must be correct or the dimmer will be on continuously and knob control will be impossible.
- For best performance, solder clean bare wires together.
- Tug connected wires to test for integrity of connection.
- When installing on boats or coaches, route wiring away from radios to avoid interference with their audio or use a clam-shell filter.