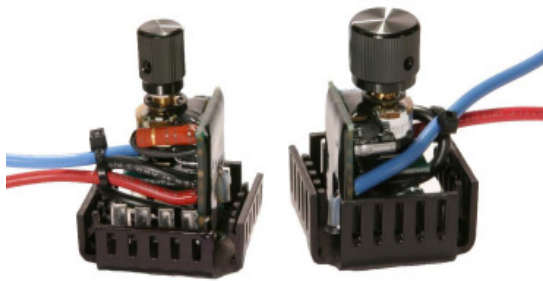


# Two-Wire DC Dimmer

## Dims and Switches Incandescent Lighting



### Installs the same as a toggle switch

**E**asy installation, extraordinary performance, commercial quality, tactile on/off, halogen compatible, low cost -- you get it all right now with the ZANE Two-Wire DC Dimmer for incandescent lighting.

Installation is a snap with marked leads, compact size, detailed installation instructions, and the same two-wire hookup as a toggle switch. Potentially troublesome negative ground wiring is completely bypassed (see Wiring Diagram, below right).

Plus, with 98 percent efficiency over the entire dimming range, energy consumption of incandescent lighting is actually comparable with fluorescent in many applications. Meanwhile cold performance, light quality, size, and versatility are all far superior. New heavier filtering reduces RF interference to the nil-to-none range, while soft start and end extend the life of expensive bulbs.

Ruggedized, premium quality construction means reliability you can count on in the adverse conditions often encountered in electrical systems: Open frame circuit design and dual heat sinks keep components cool for long life even under even

heavy utilization. All connections are 100 percent soldered to essentially eliminate the possibility of an open circuit. Surge current rating is a massive 20 times continuous as extra margin to meet the stress of incandescent lighting.

A premium-quality machined aluminum knob adds durability and distinction to the installation. Rotation action is smooth and exacting, while a tactile off position eliminates current draw when inactive.

Continuous current rating is your choice of 6, 10, 12.5, or 15 amps when free air sited, somewhat less when confined space sited (see table, reverse side). Units for both 12V and 24V electrical systems are available at the same price.

Most customers mount the unit on their own switch plate or electrical panel through a 1/4" drilled hole for exact fit and color match. Factory mounting on a standard UL-rated switch plate is also available at nominal extra cost. Plate styles include metal (ivory only), plastic (ivory, white, dark brown), and stainless steel. Silicone seal for extra corrosion protection is also optionally available.

### Features

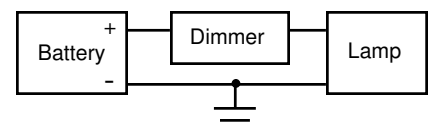
- Full-range dimming plus tactile on/off. Soft start and end extend bulb life
- Easy installation into dedicated negative ground electrical systems
- Nil radio interference
- 12V and 24V versions
- Premium quality throughout
- As compact as 1.2-inch square

### Applications

- Central area lighting (high wattage)
- Task lighting
- Instrument panels
- Rope lighting
- Signage
- Heating elements
- Outdoor and landscape
- RV and mobile
- Marine

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web: [www.zaneinc.com](http://www.zaneinc.com)

#### Wiring Diagram



# Technical Specifications

## Mode of Operation

Continuously variable, pulse width modulation. Loop powered to eliminate ground wire

## Supply Voltage

12V Version: 7 to 17 vdc working, up to 24 vdc momentary.

24V Version: 19 to 30 vdc working, up to 43 vdc momentary.

Battery or filtered dc only. Fuse or breaker in electrical box

## Output Voltage Range

From zero vdc to supply voltage minus about 1 vdc

## Continuous Output Current

Full rated current up to 105 F (40 C) ambient, 75% of rated current up to 115 F (46 C)

## Ambient Temperature Range

- 40 F (- 40 C) to 115 F (46 C) (with restrictions noted)

## DC-DC Conversion Efficiency

About 98% nominal over entire dimming range

## Reverse Polarity Protection

Can be reverse connected without damage

## Forward Transient Protection

Double resistive/capacitive filtering, zener diode clamping

## Size

Basic size is about 1.1" (29 mm) long and wide by 1.3" (35 mm) high. Maximum size with heat sink is about 1.77" (47 mm) long and wide, by 1.5" (40 mm) high

## Weight

From 3 to about 5 oz (84 to 140 gm) depending on version and options

## Installation

Installs through a 1/4" drilled hole with included hardware (keys, flats, lugs, etc unneeded)

## Load Types

Resistive loads (incandescent bulbs, heating elements, etc) only. Not suitable for LED lighting

## Line Regulation

Directly proportional to supply voltage

## Load Regulation

Generally less than 3% from minimum load to maximum load at any setting

## Voltage Drift

Nil with steady input voltage

## Power Dissipation of Drive Circuitry

Less than 0.04W. No-load current draw ("on" but at minimum setting) is about 1mA. Zero power used in click-off position

## Service Life of on/off Switch

About 50,000 cycles

## Heat Sink

Heat sinking is electrically isolated from voltage and acts as a circuit enclosure. Temperature rise under maximum load is about 40 F (22 C) above ambient

## Accessories Included

Detailed installation instructions, mounting hardware (nut, locking star washer, "o" ring)

## Safety Construction

Complies with ANSI/RVIA 12V Standards

## Warranty and Disclaimer:

Although Manufacturer warrants the goods, so far as the same are of its manufacturer, against defects in materials and workmanship under normal use and service for which they were designed for a period of 90 days after invoice date, Manufacturer's obligation under this warranty are limited, at its option, to the replacement of the part or parts determined to be defective or to the refund of the purchase price.

Claims made in this data sheet are based on extensive testing and are believed to be true. Manufacturer shall under no circumstances be liable for any special, indirect, incidental, or consequential damages owing to failure of the goods. Manufacturer makes no warranty of fitness for a particular purpose or merchantability or any other warranty, oral or written, expressed or implied, except as specifically set forth herein. Do not use ZANE products as critical components in life support devices or systems, aircraft, or other hazardous applications. Quotation, order acknowledgment, purchase, etc. does not grant or imply a license under any present or future patents owned by seller except to extent purchases are made from seller.

Any goods returned under warranty must be returned freight prepaid with an RA number to ZANE International Inc., Minden, NV.

### Two-Wire DC Dimmer for Panel Installation

Part #	UPC Number	Input Voltage	Maximum Current Free Air/Confined Space
AD2-34R-12V	02800	12V	6A/4A
AD2-34R-24V	02900	24V	6A/4A
AD2-44R-12V	03000	12V	10A/8A
AD2-44R-24V	03100	24V	10A/8A
AD2-48R-12V	03200	12V	12.5A/9.5A
AD2-48R-24V	03300	24V	12.5A/9.5A
AD2-54R-12V	03400	12V	15A/11A
AD2-54R-24V	03500	24V	15A/11A