

Instructions & Specifications: 2-Channel Dimmer, 2 x 1.5A (18W)

This dimmer is designed to operate LED and incandescent lighting operated on 12-14VDC. It has two independent circuits with integral on/off switches for control of two (2) light sources using Pulse-Wave Modulation (PWM) to provide precise dimming.

To install, use the screw terminals to attach input and output wires (shaft is 1/4"). Always place a properly rated fuse between the dimmer and power source. Take care to ensure the dimmer does not contact surrounding metal structure or other wiring.

When using with "PilotLights" Dual-Color LED Light Strips the light source has 3 input wires - one for each of the two positive (+) colors and a common negative (-) ground. Connect the ground (-) wire to either of the Output negative (-) terminals.

Specifications

Mode of Operation - Continuously variable, pulse width modulation (PWM). 100hz operating frequency

Supply Voltage - 8 to 20VDC working voltage, up to 30VDC momentary. Dimmer must be fused at power source.

Supply Voltage—6 to 25VDC working voltage, Up to 30VDC momentary. When input voltage is larger than 16VDC, output will be turned off. LED light will turn off. When the input voltage is less than 16 VDC, the dimmer will reset to normal work.

Output Voltage Range - From zero VDC to supply voltage

Output Current Range - Up to 1.5A per channel

Max Continuous Output Current - Full rated current up to 105 F (40C), 75% of rated current up to 115F (46C)

Ambient Temp Range - minus 40F (-40C) to 115F (46C), with restrictions as noted

DC-DC Conversion Efficiency - About 98% at full rated current, higher at lower current

Load Types - Optimized for resistive loads

Reverse Battery Protection - If input leads are reversed, fused link in dimmer blows if main external fuse or circuit breaker is inoperative. Always use an external fuse to protect the dimmer and load.

Forward Transient Protection - Double resistive/capacitive filtering, zener diode clamping.

MCU will detect over voltage and over-current within less than 0.1 seconds

Voltage Drift - Nil

Size - About 2" x 1.75" inch square

Weight - About 50 gm, depending on wired connection type

Load Regulation - Generally less than 3% from minimum load to maximum load at all settings

Line Regulation - Directly proportional to supply voltage

Power Dissipation of Drive Circuitry - Less than 0.038W. No load current draw is about 1mA. Nil current used if on/off switch is in Off position.

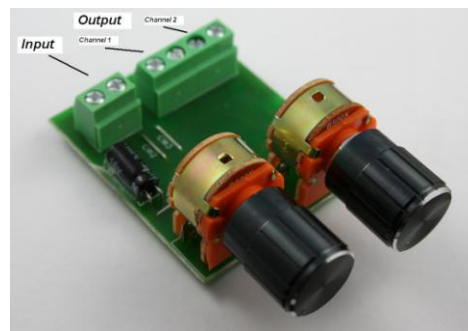
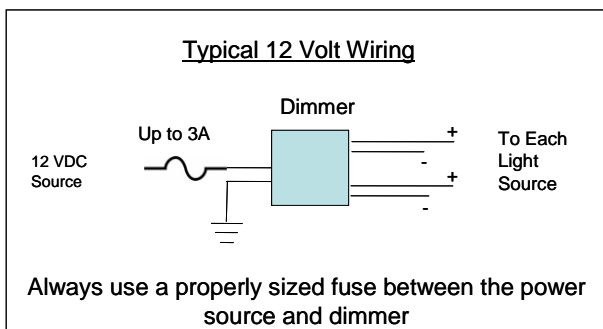
Power Dissipation of Driver Circuitry—Less than 0.1W. Not including the power dissipation of the load.

The dimmer is controlled by MCU. Provided with voltage regulation. When the dimmer is turned off, the power is not cut off completely. The power dissipation is still Less than 0.1W

Current Limiting - If light source current exceeds protected maximum of 1.5A per channel, the dimmer will stop functioning. To reset, remove input voltage momentarily. Be sure to fix the cause of overload before resetting.

Accessories - Knobs, instructions and labeled input/output

Wiring Diagrams



Applications: Automotive, Trucks, Boating, RVs/Specialty Vehicles, Experimental Aircraft (note: this part is not PMA approved for certified aircraft)

Britta Products LLC, Long Beach, CA - www.pilotlights.net - Part number: 12VDimmer02b - Made in China