Instructions & Specifications: 24V, 2-Chnl. Dimmer, 2 x 7A (168W @ 24VDC)

This dimmer is designed to operate LED and incandescent lighting operated on 24-28VDC. It has two independent circuits with integral on/off switches for control of two (2) output loads 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. Under heavy load, ensure the dimmer heat sink has adequate ventilation to prevent overheating.

Specifications

Mode of Operation - Continuously variable, pulse width modulation (PWM). 100hertz operating frequency
Supply Voltage—20 to 28VDC working voltage. When input voltage is larger than 30VDC, output will be turned off. When the input voltage drops to less than 30 VDC, the dimmer will reset to normal work.
Output Voltage Range - From zero VDC to supply voltage
Output Current Range - Up to 7.0A 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, the dimmer will not work. When the input leads are correctly connected, the dimmer will reset to normal work. 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 - 1.58" x 1.9" 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 0.1W. No load current draw is about 2mA.
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 7A 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

Mechanical Drawing:

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

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Part number: 24VDimmer02-7A - Made in China