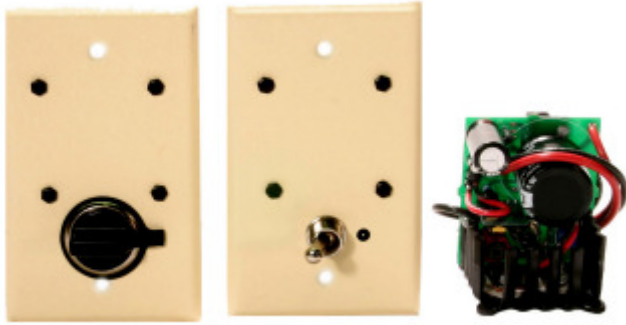


DC Linear Power Supply, 2 Amp

Adjustable, Regulated Power for Electronics



Features

- Reduces battery voltage to a preset, adjustable level
- Holds delivered voltage steady
- Removes annoying interference
- 12V and 24V battery versions available
- Low cost, high reliability

Crystal-clear performance, high efficiency

With this DC Linear Power Supply, you can power stereos, alarm systems, and most other electronic directly from a bulk storage battery or solar panel with crystal-clear performance and high efficiency. Gone forever is the "shot noise", squeal, and short life so characteristic of low cost, single stage converters. Also the interference so often associated with AC inverters and complex wiring systems.

You can even use this Linear Power Supply to recharge batteries at the exact recharge voltage listed on the battery case by the manufacturer for optimal performance and maximum battery life. Or power LED devices at exact voltage minimizing the need for wasteful dropping resistors.

Voltage is not only reduced to a preset, adjustable level, but held steady regardless of shifting parameters such as low or charging battery and load variations. Meanwhile, annoying and potentially harmful spikes and power surges are heavily dampened by the patented, two-stage design. "Ground loops", which result in hum in audio and false triggering in alarms, are essentially eliminated.

A powerful 2 amps continuous current capacity (up to 3 amps surge) is ample for most applications, while a nominal

88 percent conversion efficiency holds battery drain to an absolute minimum. Efficiency remains high even under light loading. A no-load current draw of 14mA -- about the same as an LED -- means negligible battery drain in standby mode. If overloaded, power is automatically reduced to a safe level, and restored once the overload is removed.

Resetting the output voltage to emulate a newer battery chemistry, for example 7.2V, is easy using only a voltmeter and small screwdriver. 12V units can even be even be set for 12V and 24V units for 24V to condition output and prevent damaging overvoltage such as might be caused by a multistage or "equalizing" battery charger, or by nicad.

Units come ready-to-install in a 1-gang outlet box in about 10 minutes with detailed instructions and color-coordinated mounting screws. Standard is either a lighter-type receptacle for easy attachment of appliances via a standard, fused adapter cord (such as Radio Shack part# 270-1528), or an on/off switch.

A Voltage Doubler module to adjust a 12V battery input anywhere between a 5V and 24V regulated output is also available (see table, reverse side).

Applications

- LED Lighting: Power at exact voltage minimizing the need for wasteful dropping resistors
- Stereos, alarm systems
- Battery charging
- Prevent overvoltage from an "equalizing" or multistage battery charger

LINEAR POWER SUPPLY
24V SYSTEM PERFORMANCE

DELIVERED VOLTAGE	CONTINUOUS CURRENT	EFFICIENCY
24V	2A	95%
20V	2A	88%
18V	2A	86%
15V	2A	83%
12V	2A	80%
9V	2A	77%
7.4V	2A	73%
6V	1.3A	68%
5V	1A	62%
Operation below 5V not recommended		

Protected under US Patent 5,414,340
Pat Pend
Made in USA

Technical Specifications

Mode of Operation

Two stage (PWM and linear) with optical interstage coupler. Non-isolated, point-of-use design (output leads must remain isolated from battery voltages). For extra efficiency, switching stage locks on full as source voltage reaches about 2 volts of delivered voltage

Supply Voltage and Adjustment Range

12V Version: 10 to 20 vdc battery working range. Absolute max is 32 vdc (point where transient suppressor activates). Adjustment range is from 1.2 vdc to supply voltage minus about 0.5 vdc.

24V Version: 20 to 28 vdc battery working range. Absolute max is 40 vdc (point where transient suppressor activates). Adjustment range is from 1.2 vdc to supply voltage minus about 0.5 vdc. Do not adjust for over 25 vdc.

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

Output Current (general)

System can deliver 2A continuous at most settings and ambient temperatures, and up to 3A surge where current limiting activates. Output current is automatically reduced to a safe level in the event of a thermal or other overload, and restored once the overload is removed. Includes "foldback" current limiting for continuous short circuit protection

Ambient Temperature Range

Rated current between - 40 F (- 40 C) and 90 F (32 C) ambient; 75% of rated up to 115 F (46 C)

Load Types

Resistive and capacitive. Use with motors is application-specific and therefore not recommended

Reverse Polarity Protection

Standard blade-type 15A fuse blows if input leads are reverse connected to the battery

Line Regulation

Nil as long as supply voltage remains within specified range

Load Regulation

Nil from zero load to maximum rated load at any output setting

No-Load Current Draw

About 14mA

Size

Sized to fit a standard, 1-gang outlet box

Transient Protection

Delivered voltage is decoupled from spikes in supply voltage via heavy filter capacitors and transient suppressors (both input and output). An additional external transient suppressor (such as Radio Shack part# 43-10) is recommended when using telephone equipment in lightning prone areas

Output Ripple Voltage

12V Version: About 50mV peak-to-peak at full load rated load

24V Version: About 100mV peak-to-peak at full rated load

Weight

About 4 oz (120 gm)

Accessories Included

Color coordinated switch plate
mounting screws and detailed installation instructions

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 to ZANE International Inc., Minden, NV.

Linear Power Supply, 2A Packaging Options

Part #	UPC Number	Input Voltage	Max Current
ALN-30L-SK-12V With socket on 1-gang plate	12104	12V	2A
ALN-30L-SK-24V With socket on 1-gang plate	12204	24V	2A
ALN-30L-SW-12V With switch on 1-gang plate	12105	12V	2A
ALN-30L-SW-24V With switch on 1-gang plate	12205	24V	2A
ALN-30L-VDSK-24V Voltage Doubler, socket on 2-gang plate	12296	12V	2A
ALN-30L-VDSW-24V Voltage Doubler, switch on 2-gang plate. Adjustable out up to 24V from a 12V input	12297	12V	2A