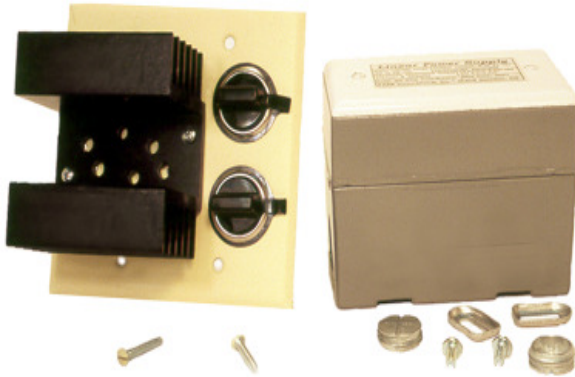


# DC Linear Power Supply, 7.5/8 Amp

## Adjustable, Regulated Power for Electronics



### Crystal-clear performance, high efficiency

**P**ower DC electronics including portable televisions, stereos, LED lighting, and alarm systems directly from a 12V or 24V battery bank/ solar panel with crystal-clear performance! Gone forever are the scan lines in TV reception so characteristic of inverters, and the "shot noise", squeal, and short life of low cost, single stage converters.

You can even use this Power Supply to recharge batteries at the exact voltage listed on the battery case by the manufacturer for maximum charging performance. Or power LED devices at exact voltage without the need for wasteful dropping resistors.

A powerful 7.5/8 amps continuous current capacity is available to energize power-hungry appliances, while a nominal 88 percent conversion efficiency minimizes battery drain.

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, potentially damaging 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.

Efficiency remains high even under low current demands. A no-load current draw of about 14mA, the same as an LED, makes this converter ideal for standby use. If overloaded, this unit automatically reduces power to a safe level, and restored power 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 a small screwdriver. 12V units can 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 nicad.

Packaging options include wall plate with optional lighter-type receptacles for easy attachment of appliances via a standard, fused adapter cord (such as Radio Shack part# 270-1528). An on/off switch can also be included, as can a Voltage Doubler module to adjust a 12V battery input anywhere between a 5V and 24V regulated output. The unit can also be packaged in a standard outdoor-type outlet box. See table, reverse side for a complete packaging options.

### Features

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

### Applications

- LED Devices: Power at exact voltage without wasteful dropping resistors
- Portable televisions, stereos, alarm systems
- Off-mode operation when using an inverter
- Battery charging

LINEAR POWER SUPPLY 24V SYSTEM PERFORMANCE		
DELIVERED VOLTAGE	CONTINUOUS CURRENT	EFFICIENCY
24V	7.5A	95%
20V	7.5A	88%
18V	7.5A	86%
15V	7.5A	83%
12V	7.5A	80%
9V	7A	77%
7.4V	6A	73%
6V	5A	68%
5V	5A	62%
Operation below 5V not recommended		

US Patent 5,237,263 and 5,414,340  
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# 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). Switching stage locks on full as source voltage reaches about 2 volts of delivered voltage for extra efficiency

## Supply Voltage and Adjustment Range

**12V Version:** 10 to 20 vdc battery working range. Absolute max is 32 vdc (point where transient suppressor activates). Adjusts 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). Output voltage adjusts from 1.2 vdc to supply voltage minus about 0.5 vdc. Do not adjust for over 25 vdc

## Output Current (general)

System can deliver 7.5A/8A continuous at most settings and ambient temperatures. 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 30A 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

## Output Ripple Voltage

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

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

## Transient Protection

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

## Accessories Included

Detailed installation instructions. Color coordinated switch plate mounting screws for plate version, mounting hardware for box version

## 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, 7.5A/8A Packaging Options

Part #	UPC Number	Input Voltage	Max Current
ALN-75L-12V On 1-gang plate	12400	12V	7.5A
ALN-75L-24V On 1-gang plate	12500	24V	7.5A
ALN-75L-SK-12V Dual sockets, 2-gang plate	12404	12V	7.5A
ALN-75L-SK-24V Dual sockets, 2-gang plate	12504	24V	7.5A
ALN-75L-SW-12V Switch, 2-gang plate	12405	12V	7.5A
ALN-75L-SW-24V Switch, 2-gang plate	12505	24V	7.5A
ALN-75L-BX-12V Installed in outdoor-type wall box with cover plate	12401	12V	8A
ALN-75L-BX-24V Installed in outdoor-type wall box with cover plate	12501	24V	8A
ALN-75L-VDSW-24V Voltage Doubler, switch on 2-gang plate. Adjustable up to 24V out from 12V input	12597	12V	7.5A