



# PLUG-IN POWER SUPPLIES, Dual Tracking Outputs

**ALL ACOPIAN  
POWER SUPPLIES  
MADE IN U.S.A.**

## INSTALLATION AND OPERATION

These Acopian Plug-in power supplies plug into standard 8-pin octal sockets (order accessory Socket SL608). As an option, they can alternately be provided with solder terminal connections. Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

Even a relatively small amount of air flowing around and through a power supply will significantly reduce the rise in its temperature resulting from operation, and therefore the temperature of the critical components within it, improving both reliability and stability. Avoid blocking air flow through perforated surfaces. Allow free air to circulate around heat sinks. Space at least one inch away from surrounding objects.

Make all connections before applying AC input power.

THE SENSING TERMINALS (PINS) MUST BE CONNECTED to the output terminals, either at the power supply socket or at the load. Failure to have the sense terminals connected will affect the output voltage (usually causing it to be higher than the rating of the supply, and unadjustable), and may result in permanent damage to both the power supply and its load. If voltage drops in the output voltage leads (which degrade regulation) are not objectionable, local sensing can be used. However, if the best possible regulation at the load is required, then connect the sense terminals to the output leads as closely as possible to the load, as shown in the schematic. This configuration permits the power supply to sense and compensate the voltage actually across the load. Note that remote sensing is capable of compensating only limited wiring drops. The voltage across the load, plus the voltage drops through the wiring, must be within the output voltage range of the supply for the voltage at the load to remain within the load regulation specification.

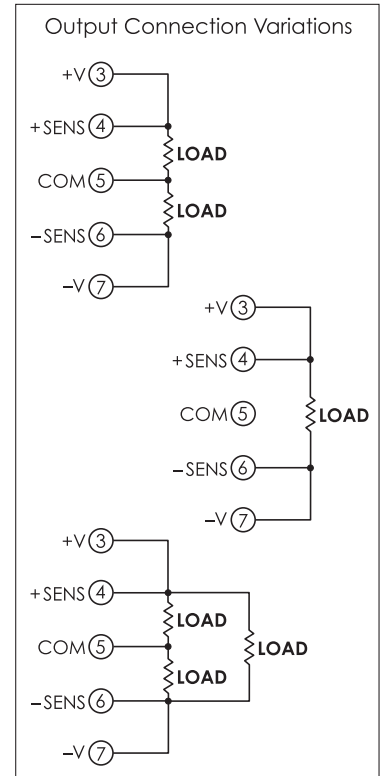
If there is any possibility of voltage from another source (another power supply, a battery, transients, etc) being applied to the power supply's output terminals, protect the power supply by using a diode in series with the +V lead and another in series with the -V lead.

Do not attempt to directly parallel the outputs of two power supplies. This would result in current flowing from the higher-set output into the lower-set output, and probable damage to both circuits. Outputs may be connected in series to obtain a higher voltage provided that a reverse-biased diode, having PIV and current ratings exceeding the combined output, is used across each output; however, keep in mind that the output current to be drawn cannot exceed the output current rating of the lowest rated supply used.

Frequent fuse failure is symptomatic of power supply overload, a short circuited output, a tripped overvoltage protector, or power supply failure. Do not overfuse; this can result in damage to the power supply.

If the AC input power contains large voltage spikes ("noise") induced by the switching of high currents, inductive loads, electro-mechanical components, etc., the input power leads to the supply should include some means of transient suppression. Otherwise, a portion of the noise may be coupled through the supply to the load. Also, the supply could be damaged. The means of suppression that is easiest to install is a 1 mfd. capacitor or a metal oxide surge suppressor (MOV) across the AC input terminals of the supply. In extremely severe cases, the use of RF chokes in series with each side of the line may also be required.

These power supplies operate as constant voltage sources when used at load current equal to or less than their ratings. If the power supply is overloaded, the current limit circuit will automatically reduce the output voltage, and it will then attempt to recover to its normal operating point. Therefore, A TRANSITORY OVERLOAD RESULTS IN A MOMENTARY DROP IN OUTPUT VOLTAGE. However, if the overload is still present when the voltage attempts to recover, the voltage will continue to alternately drop and recover, which will appear as a sawtooth oscillation of the output. Do not operate the power supply in this mode; reduce the load so that an output current equal to or less than the rating of the supply will be drawn.



**STANDARD - Plug-in**

**AC Input**  
L: Pin 2  
N: Pin 1  
GND: Pin 8

**DC Output**  
+OUT: Pin 3  
+SENSE: Pin 4  
COMMON: Pin 5  
-SENSE: Pin 6  
-OUT: Pin 7

Labels: Voltage Adjust (accessible with screwdriver), Standard 8-Pin Octal Plug, 6-32 x .25" deep Mounting Holes(4), HEATSINK, NAME PLATE, Q, J, L, M, V, W, H, .075

\*H dimension includes HEATSINK on BD and DU case sizes.

Case Size	L	W	H*	M	V	J	Q	Approx. Weight
DA	3.40	3.28	4.67	2.625	2.625	1.00	.66	2 lb. 8 oz.
BD	3.40	3.28	5.33	2.625	2.625	1.00	.66	2 lb. 14 oz.
DU	3.33	4.15	5.53	2.562	2.750	1.12	.62	3 lb. 8 oz.

**All dimensions in inches.**

**OPTIONAL - solder terminals**

**AC Input**  
L: Pin 2  
N: Pin 1  
GND: Pin 8

**DC Output**  
+OUT: Pin 3  
+SENSE: Pin 4  
COMMON: Pin 5  
-SENSE: Pin 6  
-OUT: Pin 7

Labels: Voltage Adjust (accessible with screwdriver), For installation: .25 dia. clearance holes on .375 centers are recommended, 6-32 x .25" deep Mounting Holes(4), HEATSINK, NAME PLATE, Q, J, L, M, V, W, H, .25 max., .187, .375 typ., R, R

\*H dimension includes HEATSINK on BDL and DUL case sizes.

Case Size	L	W	H*	M	V	J	Q	R	Approx. Weight
DAL	3.40	3.28	4.28	2.625	2.625	.93	.66	.34	2 lb. 8 oz.
BDL	3.40	3.28	5.26	2.625	2.625	.93	.66	.34	2 lb. 14 oz.
DUL	3.33	4.15	5.47	2.562	2.750	1.05	.62	.75	3 lb. 8 oz.

**All dimensions in inches.**



The complete Acopian catalog is available on the Internet at [www.acopian.com](http://www.acopian.com)  
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