



# "INFINITY" LINEAR POWER SUPPLIES

Acopian "Infinity" linear regulated power supplies include models with outputs up to 150 watts. These power supplies are highly configurable, with a seemingly infinite number of options available.

## INSTALLATION

Threaded holes on the bottom and right side surface may be used for mounting. An accessory Mounting Kit (model GB8 or GBR) is available to enable mounting the power supply when the opposite side of the mounting surface is inaccessible. DIN rail Mounting Kits (model LH35DIN, LV35DIN or LR35DIN) are also available.

It is very important to allow for the free circulation of air around and THROUGH the power supply (do not block fan intake or exhaust). Failure to do so will result in damage to the power supply.

Space at least one-half inch away from surrounding objects.

Make all connections before applying AC input power.

## OPERATION

THE SENSING TERMINALS MUST BE CONNECTED to the output terminals, either at the output terminals of the power supply 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), or may result in the overvoltage protection circuit (if present) to activate. If voltage drops in the output voltage leads (which degrade regulation) are not objectionable, local sensing can be used; leave in place the jumpers provided with the power supply (connecting the +Sense to the +Out and the -Sense to the -Out). However, if the best possible regulation at the load is required, then remove the jumpers and use two lighter gauge leads to connect the sense terminals to the output leads at the load. 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. Therefore, the wire gauge used for the output lines **MUST BE LARGE ENOUGH** to assure that their combined voltage drops will not exceed the difference between the maximum output voltage of the supply and the voltage to be maintained across the load. (Wide adjust output models compensate up to 0.5 Vdc drop per output line.)

In electrically noisy environments it may be necessary to use shielded wire for remote sensing or for the Output Programming options "C5" and "C6". Connect the shields to the Rtn terminal on the terminal block. Usually, the lowest level of output noise results when the load ends of the shield are *not* connected. Noise can be reduced in some applications with the use of a capacitor connected across the sense lines at the power supply; and in other applications, when one is connected across the load. A 0.1 mfd (100 WVdc) capacitor with good high frequency characteristics (such as Mylar types) is appropriate. Do not use a capacitor unless necessary.

**Overload/Short circuit Protection:** These power supplies function as a constant voltage source. A short circuit or overload will force the power supply into the over current protection mode. The supply will recover automatically when the overload or short circuit is removed.

**Standard Input voltage:** 105-125 VAC, 50-420 Hz, single phase.

### Optional Input voltages:

210-250 VAC, 50-420 Hz, single phase. (option B3)

195-220 VAC, 50-420 Hz, single phase. (option L3)

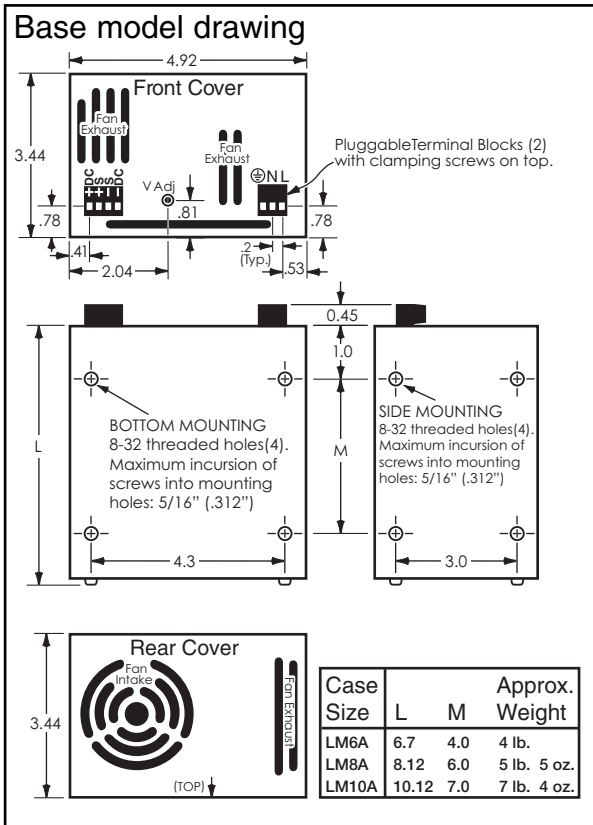
90-110 VAC, 50-420 Hz, single phase. (option L1)

22-26 VAC, 50-420 Hz, single phase. (option L2)

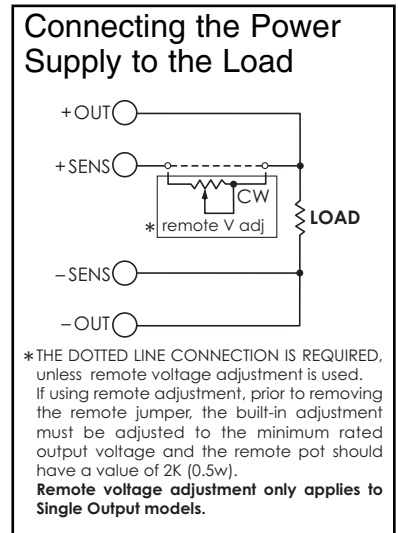
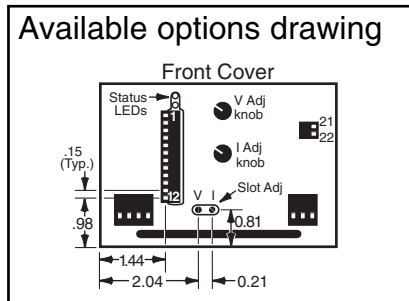
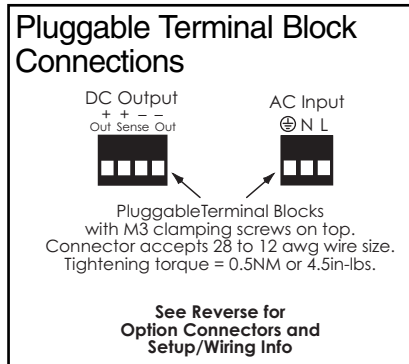
115/230 VAC, 50-420 Hz, single phase. (options B4,B5,B6)

(see reverse for option B6 wiring)

**Input Fuse Rating:** See power supply input marking for fuse value.



All dimensions in inches.



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

### Applies to CE-certified models:

#### CE Marked To:

Directive 2011/65/EU (ROHS Recast)  
Directive 2006/95/EC (Low Voltage Directive)  
Regulation (EC) No 1907/2006 (REACH)

#### SPECIAL MEASURES AND LIMITATIONS

To maintain compliance with the Low Voltage Directive, the following special measures and limitations must be observed when the product is placed into service:

- Evaluated for use in Pollution Degree 2 environment.
- Intended for connection to Class 1, TN-S power system.
- Models with outputs of 36 volts or less are considered to have SELV outputs.
- Models with outputs greater than 36 volts are considered to have hazardous voltage outputs and should not be located in an Operator Access area in the end product.
- Models with output ratings less than 240VA are considered to have non-hazardous energy levels. Models with output ratings of 240VA or greater are considered to have hazardous energy levels.
- See catalog for electrical and mechanical specifications.
- Ground terminal must be bonded to protective earth.
- Intended to be installed within end-use equipment.



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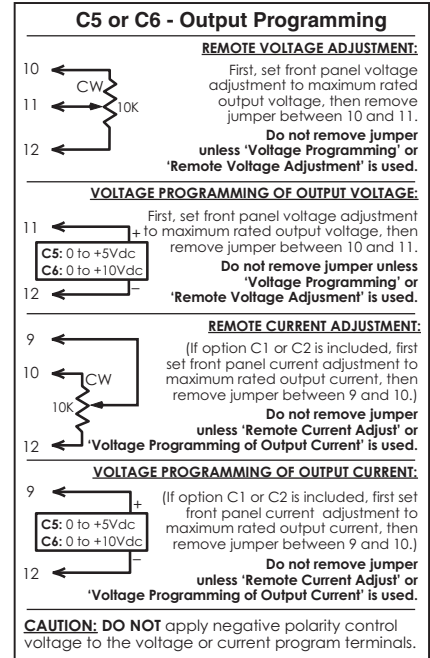
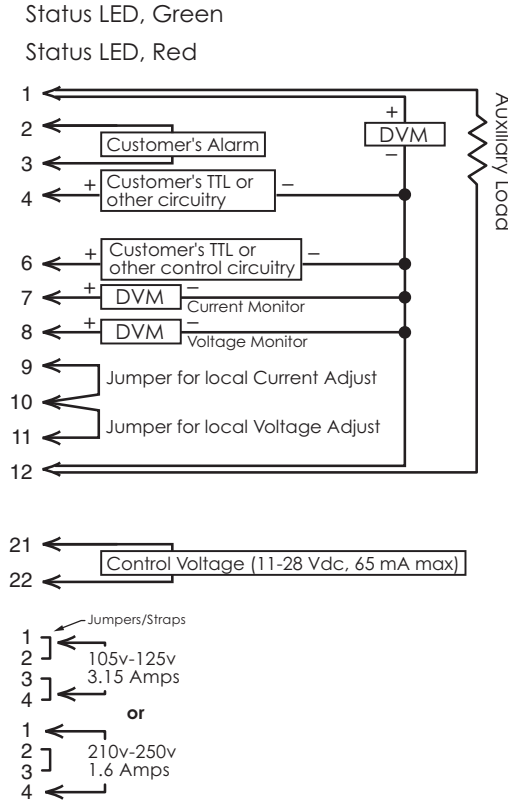
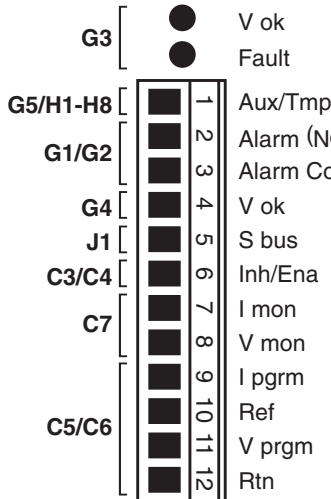
# "INFINITY" LINEAR POWER SUPPLIES - OPTIONS WIRING AND INFORMATION

## OPTION / COMPONENT:

## DESCRIPTION / WIRING:

(see bottom of page for further information)

Connectors accept 22 to 16 awg wire size. Tightening torque = 0.2NM or 1.7in-lbs. Screw size M2.



Knob - Voltage Adjust

Knob - Current Adjust

### OPTION C3, Inhibit Control, TTL compatible:

To disable the supply, apply a voltage between terminal 12 (Rtn) and terminal 6 (Inh/Ena). The voltage can be any value from +3 Vdc to +15 Vdc.

### OPTION C4, Enable Control, TTL compatible:

To enable the DC output, terminal 6 (Inh/Ena) must either be shorted to the terminal 12 (Rtn) or pulled to within 0.8 Vdc of terminal 12 (Rtn). An open collector or contact closure can be used.

### OPTION C5 or C6, Output Programming:

(voltage and/or current) See BOTH diagrams above. (Wide Adjust models only)

#### OPTION C5:

The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +5 Vdc.

#### OPTION C6:

The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10 Vdc.

Voltage mode accuracy: 0.5%. Current mode accuracy: 0.5% or ±15 mA, whichever is greater. Accuracy percentages do not apply below 5% of output rating.

### OPTION C7, Voltage and Current Monitoring:

For models with no programming or with 0-10v programming (option C6):

#### Voltage Monitor Terminal:

Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 90v models) or 100:1 (for 100v to 150v models). Accuracy is 0.5% of maximum rated output voltage.

#### Current Monitor Terminal:

-For models with greater than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp (accuracy is 1% of maximum rated output current).  
-For models with less than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp. Accuracy is 1% of maximum rated output current or ±15 mA, whichever is greater.

#### For models with 0-5v programming (option C5):

#### Voltage Monitor Terminal:

Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 45v models) or 100:1 (for 48v to 150v models). Accuracy is 0.5% of maximum rated output voltage.

#### Current Monitor Terminal:

-For models with greater than 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 10 mV/Amp.  
-For models with from 5 amps to 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp.  
-For models with less than 4.5 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp. Accuracy is 1% of maximum rated output current or ±15 mA, whichever is greater.

(When monitoring the output voltage and/or current by means of the monitor terminals, the use of an instrument having an input impedance of at least 10 megohms is recommended.)

### OPTION C8, AC on/off Control:

Apply control voltage between terminals 21(+) and 22(-) to turn power supply on. Control voltage range is 11 to 28 Vdc (@ 65 mA maximum).

### OPTION G1, NC Relay Contacts:

Close when output voltage drops more than 10% below normal.

### OPTION G2, NO Relay Contacts:

Open when output voltage drops more than 10% below normal.

### OPTION G3, Status LEDs on Front Cover:

Green LED indicates Vout is between -10% and +15% of rated output. Red LED indicates a fault condition.

### OPTION G4, 'Voltage Output OK' Monitor:

TTL High when Vout is between -10% and +15% of rated output.

### OPTION G5, Temperature Monitor:

Used to measure the power supply's internal temperature. Monitor output voltage is set to 2.5 Vdc at 25°C and varies above or below this value by 0.1 Vdc per °C. For example, if the temperature is 20°C the output will be 2 Vdc. Monitor between terminal 12 (Rtn) and terminal 1 (Aux/Tmp).

### OPTIONS H1 thru H8, Additional Low Current

#### Auxiliary Voltages:

<1% initial Accuracy, ±0.2% Line Regulation and ±0.2% Load Regulation, <10 mV peak-to-peak ripple.

- H1: 3.3 Vdc, 0.1 Amp
- H2: 5 Vdc, 0.1 Amp
- H3: 12 Vdc, 0.1 Amp
- H4: 13.8 Vdc, 0.1 Amp
- H5: 15 Vdc, 0.1 Amp
- H6: -5 Vdc, 0.1 Amp
- H7: -12 Vdc, 0.1 Amp
- H8: -15 Vdc, 0.1 Amp