



## SERIES A POWER SUPPLIES

### INSTALLATION AND OPERATION

Threaded holes on the bottom (and one side surface on M6, M9, & M13 case sizes) may be used for mounting, or the supply may be rear mounted using the same holes that attach the rear cover plate. An accessory Mounting Kit (model GB8) is available to enable mounting the power supply when the opposite side of the mounting surface is inaccessible. DIN rail Mounting Kits are also available.

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 vented surfaces. If the perforated bottom of a supply is mounted to a solid surface, use spacers at least 3/16" thick between it and the surface to which it is fastened, to permit convection air flow, or punch ventilation holes in the mounting surface. 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 **MUST** BE CONNECTED to the output terminals, either at the barrier strip on 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), 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; leave in place the jumpers provided with the power supply on the barrier strip (connecting the +SENS to the +OUT terminal and the -SENS to the -OUT terminal). However, if the best possible regulation at the load is required, then remove the jumpers and use two additional leads to connect the sense terminals to the output leads at 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.

For Under/Overvoltage Alarm Contacts Option (model number with "L" suffix): SPDT contacts switch if the power supply's output deviates by: 1.0 volt or more for 5 volt models, 2.0 volts or more for 6 to 48 volt models, 3.0 volts or more for 50 to 125 volt models. Contact ratings: 120 VAC, 8A / 60 Vdc, 1A. (To comply with SELV requirements, limit switched voltage to 60Vdc/42 VAC.)

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 one of the output leads.

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.

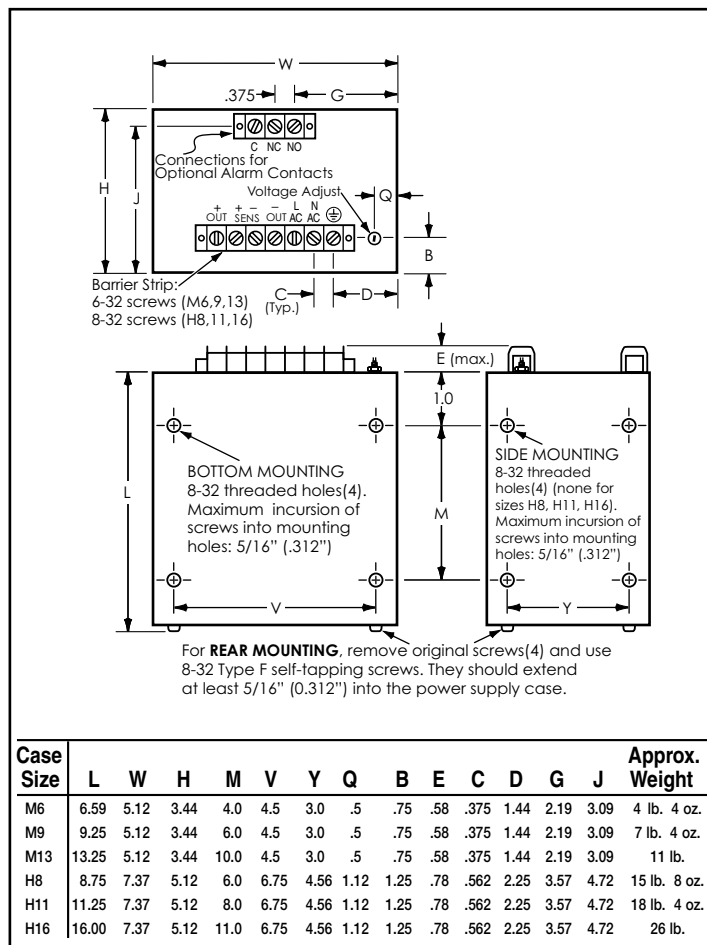
These power supplies operate as constant voltage sources when used at load current equal to or less than their ratings. If the power supply is overloaded, the current limit circuit will automatically reduce the output voltage, and it will then attempt to recover to its normal operating point. Therefore, 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.

#### Applies to CE-certified models:

##### 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:

- CE Marked to Low Voltage Directive.
- 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.
- Models without a built-in fuse require an external fuse to be used in the ungrounded (hot) side of the AC line.
- See catalog for electrical and mechanical specifications.
- Ground terminal must be bonded to protective earth.
- Intended to be installed within end-use equipment.



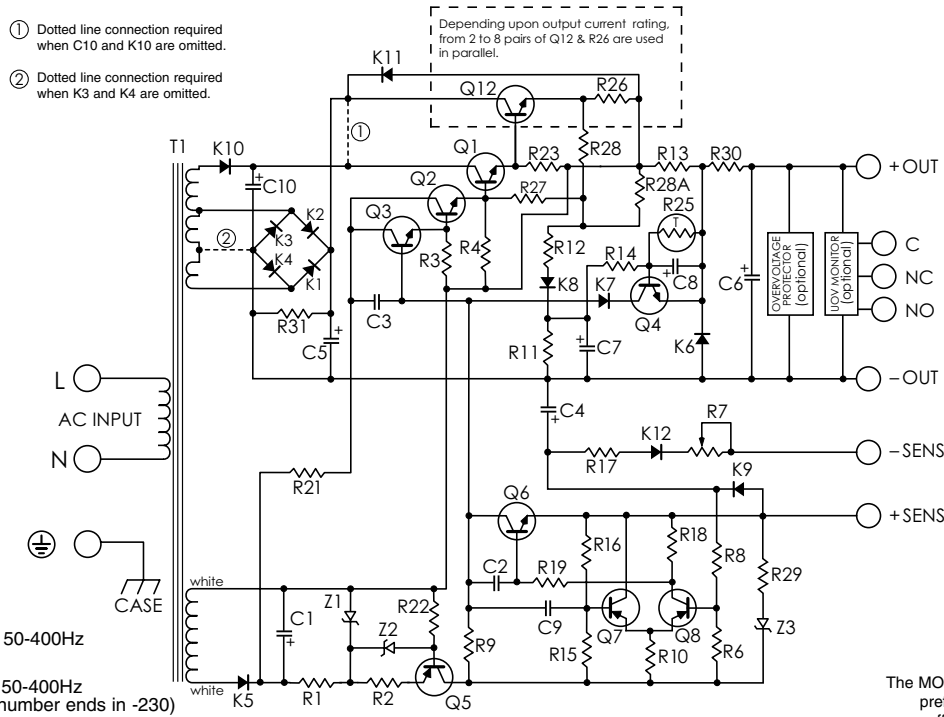
The complete Acopian catalog is available on the Internet at [www.acopian.com](http://www.acopian.com)  
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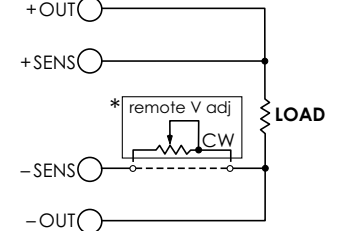


## SERIES A POWER SUPPLIES

Acopian modular power supplies are ideally suited to all applications where compact, high performance and high reliability power supplies are required. Modular construction and barrier strip interconnections provide mounting and wiring convenience and flexibility. All models have floating outputs which may be used floating, with either the positive or negative side grounded, and/or in series with another supply(ies). All have built-in short circuit protection and provision for remote sensing of output voltage at the load for applications where voltage regulation is critical. They are conservatively rated for operation at ambient temperatures to +71°C.



### Connecting Power Supply to the LOAD:



\* THE DOTTED LINE CONNECTION IS REQUIRED, unless remote voltage adjustment is used. If using remote adjustment, the built-in adjustment must be turned fully CCW. The remote potentiometer should have these values:  
For models with  $\pm 0.5\text{v}$  adjustment; use a 200 ohm pot (0.5w),  
For models with  $\pm 1\text{v}$  adjustment; use a 1K pot (0.5w)

The MODEL NUMBER indicates any included options;  
prefix V: overvoltage protection  
suffix F: fungus proofing  
suffix L: under/overvoltage alarm contacts  
suffix M: terminal strip cover  
suffix -230: 230v input

**CAUTION:** To provide protection from risk of fire, include in the AC input wiring a 250V time-delay fuse with the amp rating listed below:  
(These fuse ratings are for 115V input models only; contact factory for fuse ratings for 230V input models.)

MODEL	Fuse size	MODEL	Fuse size	MODEL	Fuse size	MODEL	Fuse size	MODEL	Fuse size
A1.5MT600	8/10	A6MT1100	2-1/2	A15MT300	1-1/4	A28H1400	8	A75MT60	1
A1.5MT900	1-1/4	A6H1600	2-1/2	A15MT550	2	A30MT210	1-1/2	A75MT100	1-1/2
A1.5MT1200	1-1/2	A6H2100	4	A15MT800	3	A30MT300	2	A75MT200	3
A1.5H2200	3	A6H2800	5	A15H1150	4	A30MT500	3	A75HT400	6-1/4
A1.5H3200	4	A7MT500	1-1/4	A15H1500	6-1/4	A30H750	5	A75HT560	8
A2MT600	8/10	A7MT800	2	A15H1900	6-1/4	A30H1000	6-1/4	A90MT50	1-1/4
A2MT1200	2	A7MT1000	2-1/2	A16MT650	2-1/2	A30H1400	8	A90MT80	1-1/2
A3MT600	1	A8MT500	1-1/4	A18MT210	1	A32MT180	1-1/4	A90MT150	3
A3MT900	1-1/2	A8MT800	2	A18MT450	2	A32MT250	2	A90HT330	6-1/4
A3MT1200	2	A8MT1050	2-1/2	A18MT650	3	A32HT900	6-1/4	A90HT440	8
A3H1700	2-1/2	A8H2000	5	A18H1400	6-1/4	A36MT130	1	A100M70	2
A3H2000	2-1/2	A8H2800	6-1/4	A18H1800	8	A36MT230	2	A100MT130	3
A3H3000	4	A9MT1000	2-1/2	A20MT200	1	A36MT400	3	A100HT300	6-1/4
A3.3MT600	1	A10MT450	1-1/2	A20MT400	2	A36HT800	6-1/4	A100HT400	8
A3.3MT900	1-1/2	A10MT750	2	A20MT600	3	A36HT1100	8	A120M60	1-1/4
A3.3MT1200	2	A10MT1000	3	A20H950	4	A48MT120	1-1/2	A120MT120	3
A3.3H1700	2-1/2	A10H1400	4	A20H1300	6-1/4	A48MT180	2	A120HT250	6-1/4
A3.3H2200	3	A10H1800	5	A20H1600	8	A48MT300	3	A120HT350	8
A3.3H3200	5	A10H2500	6-1/4	A24MT210	1-1/4	A48HT600	6-1/4	A125MT50	1-1/4
A5MT510	1	A12MT400	1-1/2	A24MT350	2	A48HT850	8	A125MT120	3
A5MT600	1-1/4	A12MT650	2	A24MT550	3	A50MT100	1-1/4	A125HT250	6-1/4
A5MT900	2	A12MT900	3	A24H850	4	A50MT150	2	A125HT350	8
A5MT1200	2-1/2	A12H1300	4	A24H1200	6-1/4	A50MT270	3	A150MT100	3
A5H1700	3	A12H1700	5	A24H1500	8	A50HT600	6-1/4	A150HT300	8
A5H2200	4	A12H2100	6-1/4	A28MT210	1-1/2	A50HT800	8		
A5H3200	6-1/4	A13MT350	1-1/4	A28MT300	2	A60MT85	1-1/4		
A6MT490	1	A13MT800	3	A28MT500	3	A60MT120	2		
A6MT600	1-1/4	A14MT300	1-1/4	A28H800	5	A60MT250	3		
A6MT850	2	A14MT800	3	A28H1100	6-1/4	A60HT500	6-1/4		
						A60HT700	8		

