



## PARALLELEABLE REDUNDANT POWER SUPPLIES, ≥30v

**Output Redundancy:** Two Paralleleable Redundant Power Supplies may be connected in parallel to provide one redundant output. When so connected, built-in diodes will detect any fault condition, isolate the output of the defective supply from the redundant output, and pass only the output of the other supply, with no interruption of output power to the load during the transition.

**Input Redundancy:** Two isolated sets of AC input connections (one set per supply) permit using two independent sources of input power, to obtain the advantage of input redundancy. By connecting a battery-backup power source (UPS) and/or a second line from the power utility to AC Input 2, output power will be maintained without interruption even when the power to AC Input 1 fails. If a second source of AC power is not available, connect the available source to both sets of input connections.

**Polarity:** Output is floating; either positive or negative output terminal may be grounded or floated up to 300 volts above ground.

### INSTALLATION AND OPERATION

These power supplies are constructed in the form of assemblies that are front mountable in standard 19" wide RETMA cabinet racks. If possible, mount in the rack spaced away from other heat dissipating or air blocking assemblies, by using blank front panels above and below each power supply. This will result in cooler running operation, which in turn will maximize stability and reliability.

Make all connections before applying AC input power.

Do not use in series or directly parallel the outputs of more than two power supplies, or use with other supplies.

THE SENSING TERMINALS MUST BE CONNECTED to the output, either at the connector terminals 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; within the connector, connect pin 5 to pin 3 and connect pin 6 to pin 4. However, if the best possible regulation at the load is required, do not connect for local sensing as described above: instead use additional leads to connect the sense terminals to the load to achieve remote sensing. 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.

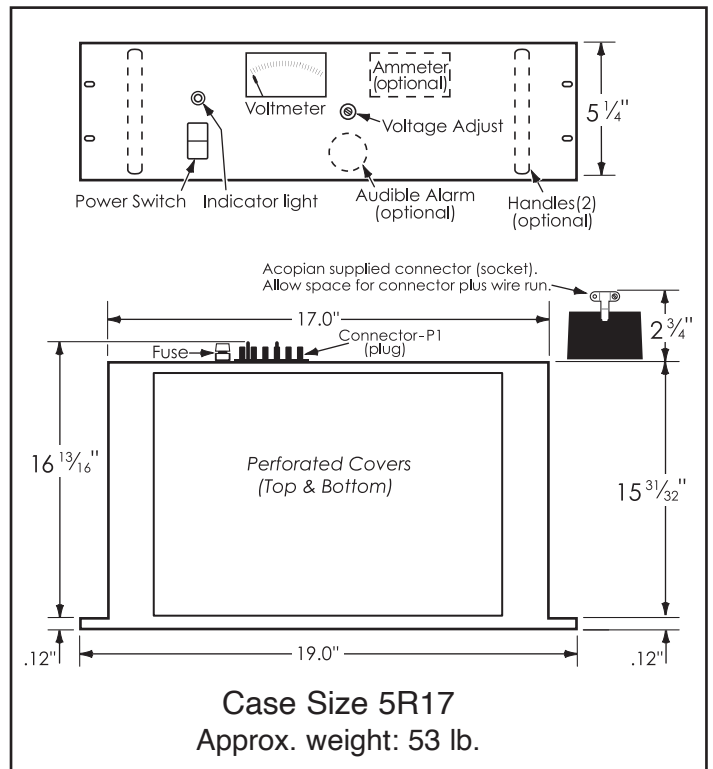
Each Paralleleable Redundant Power Supply contains a voltage monitoring circuit with relay which may be used to control external failure alarms or other circuitry. The relay switches if the output voltage of a power supply decreases by more than 2.0 volts from the nominal rating.

Each power supply contains an overvoltage protection circuit with automatic reset, to assure that its output will not significantly exceed the nominal output voltage rating under any condition, including incorrect application and misadjustment.

The power supplies have overload and short circuit protection. They operate as constant voltage sources when used at load currents equal to or less than their ratings. However, 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. **EVEN A TRANSITORY OVERLOAD RESULTS IN A MOMENTARY DROP IN OUTPUT VOLTAGE.** 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.

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.

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.

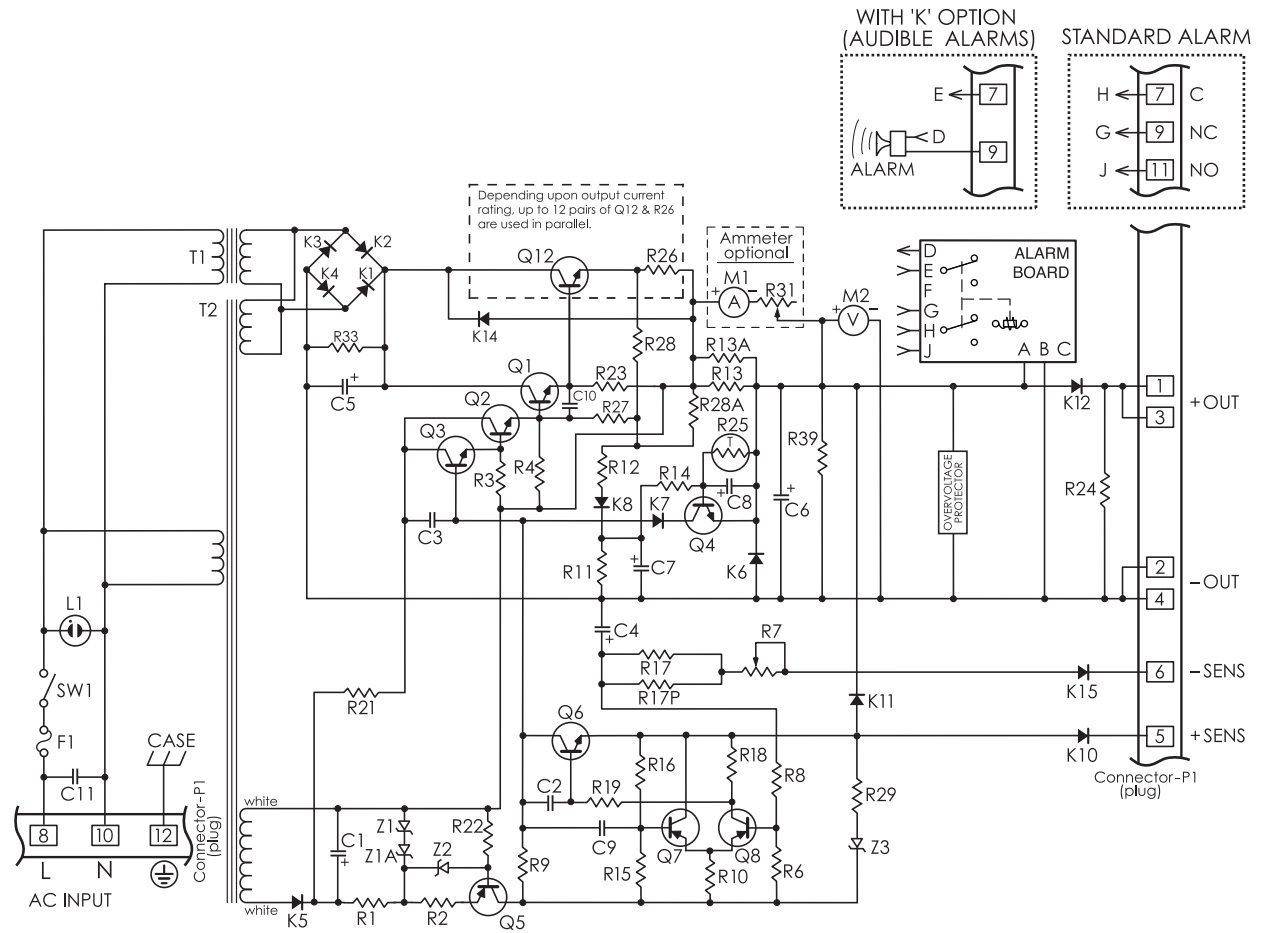


**ALL ACOPIAN  
POWER SUPPLIES  
MADE IN U.S.A.**

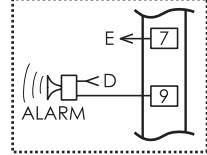




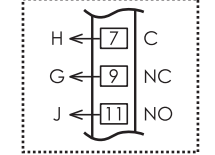
# PARALLELEABLE REDUNDANT POWER SUPPLIES, $\geq 30v$



WITH 'K' OPTION  
(AUDIBLE ALARMS)



STANDARD ALARM



105-125 VAC, 50-400Hz  
(Standard)  
210-250 VAC, 50-400Hz  
(When model number ends in -230)

The MODEL NUMBER indicates any included options;  
suffix A: ammeter  
suffix H: handles  
suffix K: audible alarm  
suffix -230: 230v input