



## HIGH VOLTAGE - RACK MOUNTING POWER SUPPLIES

Standard features include constant-voltage/constant-current crossover, remote programming of both voltage and current, provision for output inhibiting, and arc/short circuit protection.

### 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.

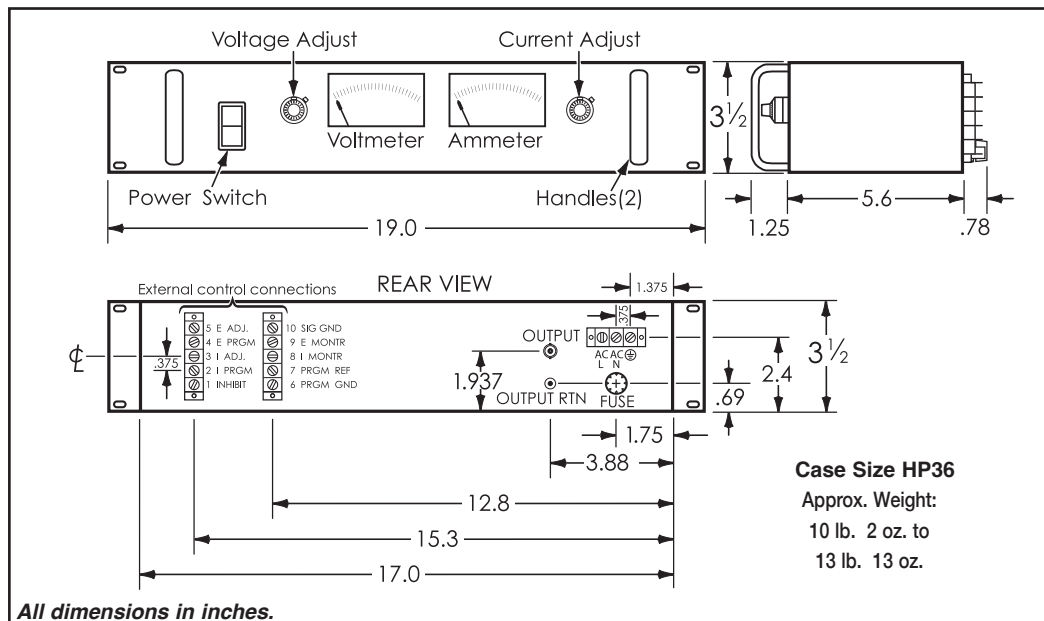
Do not connect the output of two or more power supplies in series or in parallel.

The high voltage output return, signal ground, programming ground and case ground are common and internally connected. However, each function should be wired separately, in order to avoid ground loops and/or transients resulting from any shorting or arcing in the external wiring or the load.

The power supplies are shipped from the factory wired for local (front panel) voltage and current control, and with the output set to 500 volts. Remove appropriate jumper only when remote voltage or current control is desired.

### MAINTENANCE

The internal high voltage sections are encapsulated, and are not repairable. The control circuitry on the printed circuit board is repairable. Servicing the power supply with input power applied involves substantial risk of shock. If a supply is in need of repair, returning it to the factory is recommended.



### \*\*\*CAUTION\*\*\*

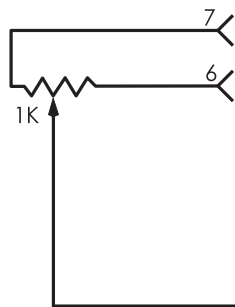
The voltages developed by these power supplies are high enough to cause serious electric shock. To minimize risk of shock:

1. Make ALL connections before applying input power.
2. DO NOT remove high voltage output lead or open the high voltage return lead during operation. IN THE ABSENCE OF A SECURE HIGH VOLTAGE RETURN LEAD, TOUCHING POWER SUPPLY CASE MAY RESULT IN SHOCK.
3. Servicing the power supply with input power applied involves substantial risk of shock.
4. Performance testing requires special equipment and must be done with extreme caution.
5. To prevent power supply damage, DO NOT apply a negative polarity control voltage to the voltage or current programming terminals.
6. Do not route high voltage output lead near input or control wiring.

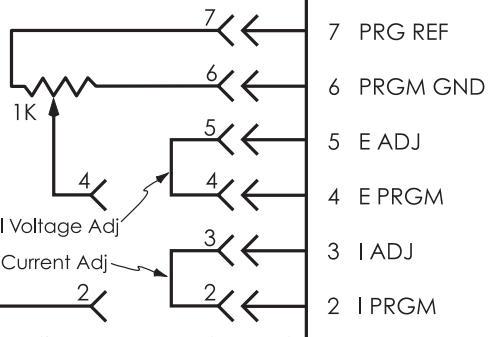


## CONNECTIONS

**REMOTE CURRENT ADJUSTMENT:**  
Remove jumper between 2 and 3, then make connections as shown below.

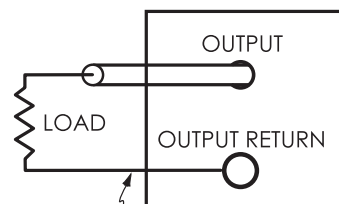


**REMOTE VOLTAGE ADJUSTMENT:**  
Remove jumper between 4 and 5, then make connections as shown below.



Do not remove jumper between pins 2 and 3 if remote current adjustment is not used, or between pins 4 and 5 if remote voltage adjustment is not used.

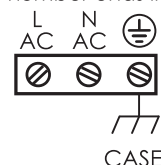
### OUTPUT WIRING:



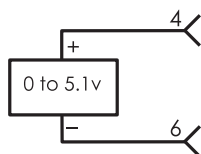
**CAUTION:**  
DO NOT open return lead while power supply is in operation

### AC INPUT:

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

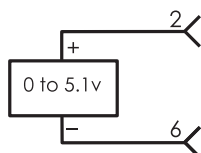


**NOTE:** Use positive polarity programming voltages for both positive and negative output power supplies.



### VOLTAGE PROGRAMMING OF OUTPUT VOLTAGE:

First set front panel voltage adjustment to maximum rated output voltage, then remove jumper between 4 and 5.

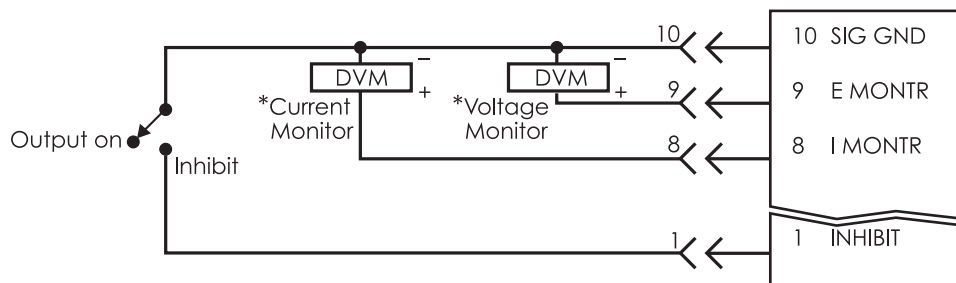


### VOLTAGE PROGRAMMING OF OUTPUT CURRENT:

First set front panel current adjustment to maximum rated output current, then remove jumper between 2 and 3.

**CAUTION:** DO NOT apply negative polarity control voltage to the voltage or current program terminals.

### MONITOR & INHIBIT:



\*When monitoring the output voltage and current by means of the monitor terminals, the use of an instrument having an input impedance of at least 10 megohms is recommended. The ratio of output voltage to monitor voltage is 1,000:1 for power supplies with maximum output voltages less than 5 kV, and 10,000:1 for supplies with the maximum outputs of 5 through 30 kV. The ratio of the voltage on the current monitor connection to the output current is 10 mV/mA for supplies with maximum current ratings greater than 40 mA, 100 mV/mA for ratings of 4 to 40 mA, and 1 V/mA for ratings less than 4 mA.