



HIGH VOLTAGE - MODULAR POWER SUPPLIES (AC-DC and DC-DC)

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

Threaded holes on the bottom and one side surface may be used for mounting. DC input models may also 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. DC input models may also be DIN rail mounted using an accessory Mounting Kit (model GR35DIN).

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.

Dc input models are protected against reversed polarity input voltage by means of a shunt diode rated at 3A for models with a 30 watt output rating, and at 6A for 60 watt models. External protection is recommended to limit fault currents to these values. (This also protects the DC input voltage against power supply failure.)

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, and the input return of DC input models, 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. Note that the input voltage on the connector pin 9 of DC input models must be positive.

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 powers 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.

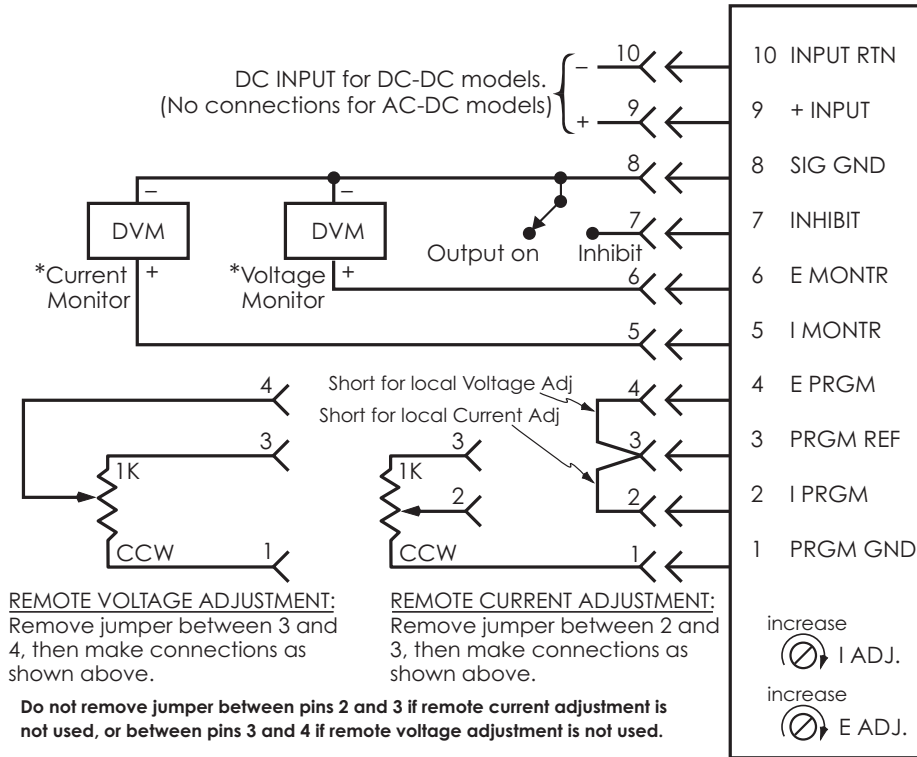
**ALL ACOPIAN
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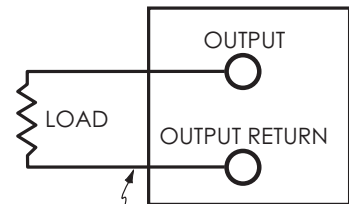
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CONNECTIONS

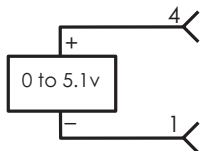


*When monitoring the output voltage and current by means of the monitor terminals, the use of an instrument having an input impedance of at least 10 megohms is recommended. The ratio of output voltage to monitor voltage is 1,000:1 for power supplies with maximum output voltages less than 5 kV, and 10,000:1 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.

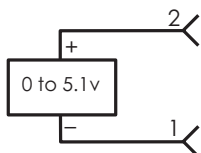


CAUTION: DO NOT open return lead while power supply is in operation

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



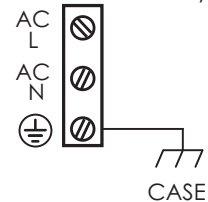
VOLTAGE PROGRAMMING OF OUTPUT VOLTAGE:
First set front panel voltage adjustment to maximum rated output voltage, then remove jumper between 3 and 4.



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.

AC INPUT for AC-DC models:
105-125 VAC, 50-400Hz (Standard)
210-250 VAC, 50-400Hz (When model number ends in -230)



OPTIONAL OUTPUT CONNECTOR

Models with an output of 5000 volts or less can be provided with an MHV connector (and 8' long detachable output cable with mating MHV connector installed on one end) instead of the flying lead. To order, add suffix letter "T" to the model number.

