Cat. #5010-Q

# **QuadraSource**<sup>™</sup> **Power Source**



## **Specifications:**

Max Voltage: 300 Volts

**Voltage Steps:** 10 - 300 V in increments of 1 V

Max Current: 0.5 amp

Type Output: Variable Voltage

**Lead Inputs:** 4 Sets, Recessed, Color Coded **Fuse:** 2.0 Amp, 250 V, 1.6 Amp

Input Power: 50-60 Hz, 100-264 Volts
Connection: 3-Wire Grounded Cord

### **Safety Features:**

- Load connect detection unit will display an error unless a connection is made.
- Short circuit detection unit will display an error if the current is too high.
- Loose connection detection unit will display an error if the current keeps changing.
- Recessed terminals terminals are recessed to safely accommodate leads.
- Protective casing minor liquid spills can be easily wiped up.

### **Current-Voltage Relationship**

#### V=IR

*V = Voltage, I = Current, R = Resistance* 

Ohm's Law states that the voltage (V) through a conductor is directly proportional to the current (I). The constant of proportionality is the resistance (R).

Therefore, our power supplies can be set either to a constant voltage or a constant current, however they cannot both be controlled at once. The resistance is determined by a number of factors including the device that the current is being applied to, and any buffer or gel in that device.

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#### TO USE AT A CONSTANT VOLTAGE:

- 1. Turn unit on on using the switch on the rear of the unit next to the plug.
- 2. Use the up or down arrows ♦ to the right of the screen to select the desired voltage (default is set to 125 V).
- Use the right arrow > below the up & down arrows to move to the "time" mode and use the up arrow to set the run time (refer to kit or experiment instructions for appropriate run time).
- 4. Once the parameters have been set, secure the leads to both the device or chamber and the appropriate red and black receptacles on the power supply.
- 5. Press run/pause button to begin. For electrophoresis, continue to occasionally monitor the tracking dye in the samples to ensure they do not run off the end of the gel.
- To pause the electrophoresis run, press the run/pause button. Make sure there is no current running before removing the lid. You may resume the run where you left off after securing the lid.
- 7. To stop the power, press the stop button  $\blacksquare$ .

#### TO USE AT A CONSTANT VOLTAGE/AMPERAGE:

- 1. Turn unit on on using the switch on the rear of the unit next to the plug.
- 2. Press the right arrow > below the up & down arrows twice to move to the "set current" mode.
- 4. Use the right arrow below the up & down arrow to navigate to the "set time" mode, and use the up arrow to set the time (refer to kit or experiment instructions for appropriate run time).
- 5. Once the parameters have been set, secure the leads to both the device or chamber and the appropriate red and black receptacles on the power supply.
- 6. Press run/pause button to begin. For electrophoresis, continue to occasionally monitor the tracking dye in the samples to ensure they do not run off the end of the gel.
- 7. To pause the electrophoresis run, press the run/pause button. Make sure there is no current running before removing the lid. You may resume the run where you left off after securing the lid.
- 8. To stop the power, press the stop button  $\blacksquare$ .



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