



The CL-100 Temperature Controller is an automatic single channel controller capable of accurately maintaining a Peltier device between 0° and +50°C, or a resistive heating element between ambient and +65°C.

- Quiet operation suitable for electrophysiology applications
- Can be used with both Peltier devices (e.g. SC-20) and resistive heating applications (e.g. Series 20 platforms)
- Built-in protection for Peltier devices
- Single control temperature adjustment
- Freeze alert and alarm circuitry
- External inputs for computer control of set temperature or applied voltage

The CL-100 Temperature Controller is an automatic single channel controller capable of accurately maintaining a Peltier device between 0° and 50°C. Power for the instrument is provided by an ultra low noise power supply making it suitable for use in sensitive electrophysiology applications. The CL-100 will also maintain a resistive heating element from ambient to +65°C (requires the use of an ACC-1 adapter cable).

While the instrument has several uses, it was specifically designed to control the SC-20 Dual In-line Solution Heater/Cooler. (Shown to the right.) When coupled with the SC-20, the CL-100 provides efficient control of perfusion solution temperatures. Both of these instruments in-turn provide heating and cooling to our PHC Series heater/cooler jackets and for some of Warner's Series 20 Open Bath Recording Chambers.

The CL-100 is simple to use with a single control for temperature adjustment. It sports two BNC inputs for external computer control of either the set temperature or the applied voltage level. It can simultaneously monitor the system temperature (i.e. the temperature of the feedback thermistor situated within SC-20) and a separate, secondary point of interest in the experimental set-up (e.g. a chamber bath thermistor). Two BNC output connectors are provided to send these thermistor readings to a data acquisition system or chart recorder.

Total automatic control is provided in automatic mode, while manual control is also available. A loop-speed selector (i.e. fast, medium, or slow) is used to optimize the feedback response of the system to accommodate the intrinsic thermal delay characteristics of the setup. Built-in circuitry limits the maximum temperature of the Peltier to prevent damage and a freeze alert/alarm indicates when the cold side of the Peltier reaches 0°C.

