HCT-10/HCT-30 Temperature Controllers for Heating and Cooling

HCT-10/HCT-30 - Bipolar Temperature Controllers

ALA's HCT-10/HCT-30 with ACM (Automatic Control Mode) are heating and cooling controllers with an additional external feedback channel. Both controllers can operate a resistive device for heating or a Peltier device for heating and cooling. One controller is all you will need! Specifically designed for use in electrophysiology where low noise experiments are a must. When using the external sensor, the HCT-10/HCT-30 can detect if the sensor has been removed from the bath or if the bath has run dry, thus switching temperature feedback to the internal thermistor of the device being heated or cooled (ACM mode). They both have three

speeds of operation for varying set-point reach times and an alarm mode for detection of a missing sensor or a dry bath. Other features include external output voltage proportional to temperature and external command input voltage.

The HCT-10 is a single channel controller for connection to any one of ALA's devices. The HCT-30, TriTemp is a three channel connector. Connect to one of ALA's stage microincubators, also connect to a perfusion cube & connect the 3rd power supply channel to ALA's objective heater. Connect all devices with one temperature controller.





HCT-10/HCT-30 Features:

- Single (HCT-10) or three (HCT-30) channel temperature controller
- Two feedback control points per channel w/PID loops
- HCT-30 includes a power supply channel
- HCT-30 includes automatic power sharing
- · Analog input/outputs for connection to DAQ
- · Compatible with all ALA devices
- · Can control Peltier and resistive devices

Both the **HCT-10** and the **HCT-30** feature an industry exclusive ACM mode (Automatic Control Mode) that senses when a more than 7°C temperature difference occurs at the sensor that is in the prep verses the control point in the heated/cooled device. Control is automatically switched to the sensor in the device until the problem that caused the offset, such as the sensor falling out of the bath, can be corrected, thus saving the tissue from damage due to overheating.



Specifications			
	HCT-10	HCT-30	
Dimensions/Weight	8.5"/21.6cm x 7.5"/19cm x 3.75"/9.5cm-3.2lbs/7kg	19"/48.2cm x 3.5"/8.89cm x 11"/28cm - 6lbs/13.2kg	
Voltage/Current Output	2-12 VDC/2 Amp	2-12 VDC/2 Amp per channel	
Voltage/Current Input	24 VDC/2 Amp	15 VDC/6 Amp	
Manual channel adjust range	N/A	2 to 12VDC	
Min. Load Ω	2.0 Ω	2.0 Ω per channel	
Thermistor	2252Ω @ 25°C	2252Ω @ 25°C	
Command Input/Output	10 mV/°C	10 mV/°C	
Temperature Range	0-65°C	0-65°C	

Ordering Information				
HCT-10	One channel bipolar temperature controller for heating and cooling applications, use with Peltier elements or resistive elements	HCT-30	Three channel bipolar temperature controller for heating and cooling applications, use with Peltier elements or resistive elements	
TS-1	Standard size thermistor probe	TS-2	Ministure size thermistor probe	
TS-1M	TS-1 probe with cable to connect to HCT	TS-2M	TS-2 probe with cable to connect to HCT	

