

# TC-1000 Temperature Controller

Artifact-free temperature maintenance for small animals



Model TC-1000 Temperature Controller monitors and controls the body temperature of small animals. This micro-processor-based instrument features a low-voltage DC proportional controller to provide artifact-free heating using a resistive heating blanket. The smooth proportional control eliminates the electrical transients common to on/off type controllers. A front-panel LCD panel displays the current body temperature, the targeted set-point temperature, alarm settings, and a heater power bar graph. An analog output provides a linear voltage corresponding to temperature.

The controller uses standard YSI-400 series thermistor probes and our miniature TH-2K probe for mice. These interchangeable probes are available from CWE in a variety of sizes to suit the animal being monitored. Resistive heating blankets are available in mouse, rat, or cat size. Other resis-

sive-type heating devices (such as immersion heaters) can be connected, as long as the current draw is less than 3A at 12VDC. Heater currents up to 10A are possible using an external battery or power supply, accessible using binding posts on the rear panel.

The TC-1000 controller is simple to operate. After plugging in the probe and heating pad, the animal's temperature is shown on the display. The adjustable set-point temperature and alarm band is also displayed, both being adjustable using a single knob. An over/under temperature alarm with adjustable hysteresis is pushbutton activated. The unit automatically detects fault conditions such as a defective or disconnected probe or heating pad.

Complete systems are available for mice, rats, and cats that include the appropriate probe and heating pad.

## SPECIFICATIONS

Temperature control range .....	25 - 45 °C
Temperature resolution .....	0.1°C
Thermistor probe compatibility .....	YSI-400 Series
Probe input connector .....	Phone jack, 2-cond
Analog temperature output .....	100mV/°C
Heater blanket connection .....	5-pin locking DIN
Heater power .....	12VDC @ 3A max
Power requirements .....	120/240VAC (switchable), 50/60Hz, 75VA
Dimensions .....	9.4W x 4.5H x 8 inches (24 x 11.5 x 20.5 cm)

## ORDERING INFORMATION

<u>Part No.</u>	<u>Model</u>	<u>Description</u>	<u>Applications</u>
08-13000	TC-1000 Mouse	Temperature controller w/ 1 probe & 1 pad	Complete temperature control system for mice
08-13001	TC-1000 Rat	Temperature controller w/ 1 probe & 1 pad	Complete temperature control system for rats
08-13002	TC-1000 Cat	Temperature controller w/ 1 probe & 1 pad	Complete temperature control system for cats
08-13013	Heating Pad Mouse	Heating pad w/ cover, mouse-size (3 x 6 in)	Waterproof, MR-compatible
08-13014	Heating Pad Rat	Heating pad w/ cover, rat-size (5 x 7 in)	Waterproof, MR-compatible
08-13015	Heating Pad Cat	Heating pad w/ cover, cat-size (10 x 18 in)	Waterproof, MR-compatible
10-09012	YSI-451	Mouse probe, 1mm dia	Mouse-size rectal probe (supplied w/ TC-1000 Mouse)
10-09010	YSI-401	Thermistor probe for cats, 1/8" dia	Cat-size rectal probe (supplied w/ TC-1000 Cat)
10-09020	YSI-402	Thermistor probe for rats, 3mm dia	Rat size rectal probe (supplied w/ TC-1000 Rat)

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