Xetron STC-1000Pro

Xetron STC-1000Pro Digital Temperature Controller User Manual

Model: STC-1000Pro | Brand: Xetron

1. Introduction

The Xetron STC-1000Pro is a versatile digital temperature controller designed for precise temperature management in various environments. It features dual outlets for simultaneous heating and cooling control, a wide temperature range, and user-friendly operation. This manual provides detailed instructions for setting up, operating, and maintaining your device.

Figure 1: Xetron STC-1000Pro Digital Temperature Controller. This image displays the main unit with its digital display, control buttons, power cord, temperature sensor, and the dual-outlet power strip for heating and cooling devices.

Applications

The STC-1000Pro is suitable for a wide range of applications requiring accurate temperature control, including:

- Reptile enclosures and terrariums
- Home brewing and fermentation
- Incubators
- Greenhouses
- Aquariums
- Refrigerators

Figure 2: Common applications for the Xetron STC-1000Pro. This image illustrates the controller's use in home brewing, incubators, aquariums, and flower cultivation, highlighting its versatility.

2. Key Features

- **Ideal Temperature Control:** Two outlets allow simultaneous or separate connection of heating and cooling equipment for automatic temperature switching. Wide control range of -40 to 230 ℉ (-40 to 110 ℃) with a temperature accuracy of ±1 ℃ / ±2 ℉.
- **User-Friendly Design:** Simple 3-button operation and pre-wired design for plug-and-play functionality. Large display for easy real-time data reading.
- **Dual Alarm System:** Adjustable high/low temperature alarms with audible beeps and a bell icon on the display, ensuring timely alerts even when not near the device.
- **Customizable Parameters:** Supports settings for ℃/℉ unit switching, temperature calibration, high and low alarm values, start delay, and protection time (cooling mode only).
- **Safety and Quality:** Constructed from V-0 flame-retardant ABS material. Features compressor delay protection and complies with CE and FCC standards for safe operation.
- **IP65 Waterproof Probe:** The temperature probe head can be immersed in fresh water, and the main unit features an internal rubber ring to prevent water ingress.

Figure 3: Temperature control range of the Xetron STC-1000Pro. This image highlights the controller's ability to maintain temperatures within a desired range of -40 to 230 °F using both cooling and heating devices.

Figure 4: Large screen display of the Xetron STC-1000Pro. The image shows the display dimensions and labels for PV (Present Value), SV (Set Value), Csp (Cooling Start Point), and Hsp (Heating Start Point), indicating ℃/℉ switchability.

Figure 5: Visual and audible alert features. This image illustrates the double alarm and delay protection functionalities of the controller, enhancing safety and monitoring.

Figure 6: Safety and quality certifications. The image highlights the V-0 flame-retardant ABS material and compliance with CE, FCC, and RoHS standards, ensuring product safety.

Figure 7: IP65 waterproof features. This image demonstrates the waterproof capability of the temperature probe, which can be immersed in fresh water, and the internal rubber ring for main unit protection.

3. Setup Instructions

1. **Unpack the Device:** Carefully remove the Xetron STC-1000Pro controller and its components from the packaging.
2. **Connect the Sensor:** Ensure the temperature sensor is fully inserted into its dedicated port on the side of the controller. A loose connection can lead to "ERR" display.
3. **Position the Sensor:** Place the temperature probe in the environment where temperature monitoring and control are required. Ensure it is not directly exposed to heating or cooling elements to get an accurate reading.
4. **Connect Heating/Cooling Devices:**
    - Plug your heating device (e.g., heat lamp, heating mat) into the socket labeled "HEATING".
    - Plug your cooling device (e.g., fan, chiller) into the socket labeled "COOLING".

    Important: The maximum output for each socket is 10A at 240VAC. Do not connect high-power equipment exceeding these limits.
5. **Power On:** Plug the controller's main power cord into a standard 230V AC power outlet. The display

will illuminate, showing the current temperature (PV) and other settings.

Figure 8: Plug-and-play setup of the Xetron STC-1000Pro. This image demonstrates the simplicity of connecting the controller, showing it mounted on a wall next to a terrarium, with heating/cooling devices plugged in.

4. Operating Instructions

The STC-1000Pro features a simple 3-button interface:**SET**, **UP (▲)**, and **DOWN (▼)**.

4.1 Display Overview

- **PV (Present Value):** Displays the current measured temperature.
- **SV (Set Value):** Displays the target temperature you wish to maintain.
- **Csp (Cooling Start Point):** The temperature at which the cooling device will activate.
- **Hsp (Heating Start Point):** The temperature at which the heating device will activate.

4.2 Setting the Target Temperature (SV)

1. Press the **SET** button once. The SV value will flash.
2. Use the **UP (▲)** or **DOWN (▼)** buttons to adjust the target temperature.
3. Press **SET** again to confirm and save the setting, or wait a few seconds for it to save automatically.

4.3 Advanced Parameter Settings

To access advanced settings, press and hold the **SET** button for approximately 3 seconds until the display changes to show parameter codes.

Figure 9: Diagram illustrating parameter settings. This image shows the relationship between TS (Temperature Set-point), CD (Cooling Differential), HD (Heating Differential), Csp (Cooling Start Point), and Hsp (Heating Start Point).

Use the **UP (▲)** or **DOWN (▼)** buttons to navigate through the parameters. Press **SET** to enter a parameter's value, then use **UP (▲)** or **DOWN (▼)** to adjust, and **SET** again to save.

Table 1: Advanced Parameters

Parameter	Description	Range	Default
TS (Temperature Set-point)	The desired target temperature (same as SV).	-40 to 110 ℃ / -40 to 230 ℉	Varies
CD (Cooling Differential)	The difference between the cooling start point (Csp) and the set temperature (TS). Cooling activates when PV ≥ TS + CD.	0.1 to 30 ℃ / 0.1 to 54 ℉	2 ℃ / 3.6 ℉

Parameter	Description	Range	Default
HD (Heating Differential)	The difference between the heating start point (Hsp) and the set temperature (TS). Heating activates when PV ≤ TS - HD.	0.1 to 30 °C / 0.1 to 54 °F	2 °C / 3.6 °F
PT (Protection Time)	Compressor delay protection time (in minutes) for cooling mode only. Prevents frequent compressor cycling.	0 to 10 minutes	3 minutes
CA (Temperature Calibration)	Adjusts the temperature reading to match an external reference thermometer.	-10 to 10 °C / -18 to 18 °F	0 °C / 0 °F
CF (Unit Switch)	Switches between Celsius (°C) and Fahrenheit (°F).	C / F	C
HA (High Alarm)	Sets the upper temperature limit for the alarm.	TS to 110 °C / TS to 230 °F	110 °C / 230 °F
LA (Low Alarm)	Sets the lower temperature limit for the alarm.	-40 °C / -40 °F to TS	-40 °C / -40 °F

After adjusting parameters, press and hold **SET** again for 3 seconds to exit the advanced settings menu and return to normal operation.

5. Maintenance

- **Cleaning:** Disconnect the power before cleaning. Wipe the controller's surface with a soft, damp cloth. Do not use abrasive cleaners or immerse the main unit in water. The temperature probe can be cleaned with water.
- **Storage:** Store the device in a dry environment within the temperature range of -20 °C to 75 °C (-4 °F to 167 °F) to ensure the longest possible lifespan.
- **Sensor Care:** Ensure the temperature sensor cable is not pinched or damaged. A damaged sensor can lead to inaccurate readings or error messages.

6. Troubleshooting

Table 2: Troubleshooting Guide

Problem	Possible Cause	Solution
"ERR" displayed on screen	Temperature sensor not fully inserted or damaged; temperature exceeds measurement range.	Ensure the sensor is fully inserted into its port. If the issue persists, the sensor may be faulty and require replacement. If the temperature is outside the -40 to 110 °C range, the controller will display "ERR".
Alarm sounds and bell icon appears	Current temperature (PV) has exceeded the set high alarm (HA) or fallen below the low alarm (LA) threshold.	Check the environmental conditions. Adjust HA/LA settings if necessary. The controller will disable all outputs in fault alarm mode to protect equipment.

Problem	Possible Cause	Solution
Heating/Cooling device not activating	Incorrect temperature settings (TS, CD, HD); compressor delay protection (PT) active; device not properly plugged in; device malfunction.	Verify TS, CD, and HD settings. Wait for the PT delay to expire in cooling mode. Ensure devices are securely plugged into the correct outlets. Test heating/cooling devices independently.
Inaccurate temperature reading	Sensor placement; temperature calibration (CA) offset.	Relocate the sensor to a more representative area. Use the CA parameter to calibrate the reading against a known accurate thermometer.

7. Specifications

Table 3: Product Specifications

Feature	Detail
Model Number	XT-STC1000Pro-01US
Brand	Xetron
Voltage	230V AC (Note: Product description mentions 230V, specifications mention 110V. User should verify their specific model's voltage requirements.)
Max Output Current	10A per socket
Temperature Control Range	-40 °C to 110 °C (-40 °F to 230 °F)
Temperature Accuracy	±1 °C / ±2 °F
Display Type	OLED
Material	Flame-retardant ABS Plastic
Product Dimensions (L x W x H)	20 x 15 x 6 cm
Weight	400 grams
Operating Temperature	Up to 110 °C
Included Components	1x Temperature Controller

8. Safety Warnings and Precautions

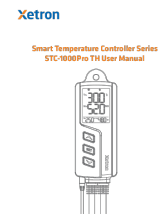
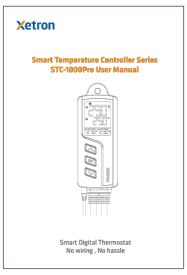
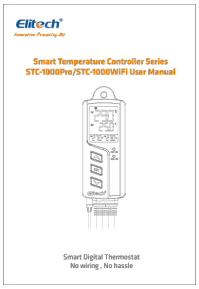
- **Electrical Load:** Do not connect equipment with a total power consumption exceeding 10A (2400W at 240V) to each outlet. Overloading can cause damage to the controller and connected devices, and poses a fire hazard.

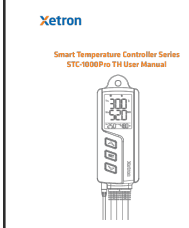
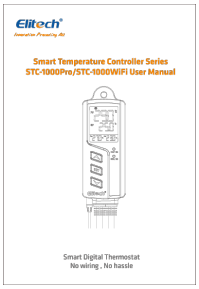
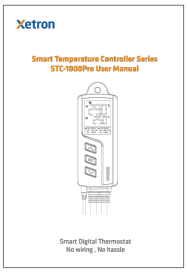
- **Voltage Compatibility:** Ensure the controller's voltage (230V) matches your local power supply.
- **Water Exposure:** While the probe is waterproof, the main controller unit is not designed for immersion. Avoid exposing the main unit to direct water spray or submersion.
- **Sensor Integrity:** Always ensure the temperature sensor is fully and securely inserted. A short-circuited or damaged sensor will trigger a fault alarm and disable outputs for protection.
- **Children and Pets:** Keep the device and its cables out of reach of children and pets to prevent accidental damage or injury.
- **Ventilation:** Ensure adequate ventilation around the controller to prevent overheating.

9. Support and Contact Information

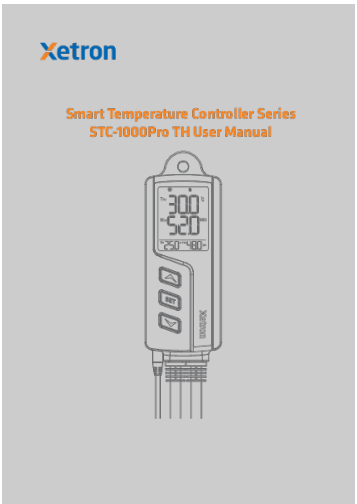
For any questions, technical assistance, or customer service inquiries regarding your Xetron STC-1000Pro Digital Temperature Controller, please contact Xetron customer support. We are committed to providing satisfactory customer service.
Please refer to the product packaging or the retailer's website for the most current contact details.

Related Documents - STC-1000Pro

	Xetron STC-1000Pro TH Smart Temperature Controller Series User Manual Comprehensive user manual for the Xetron STC-1000Pro TH Smart Temperature Controller Series, detailing its features, operation, installation, and technical specifications for precise temperature and humidity control.
	Xetron STC-1000Pro Smart Temperature Controller User Manual User manual for the Xetron STC-1000Pro smart digital temperature controller. Details features, operation, installation, and specifications for precise temperature control in applications like homebrewing, aquariums, and incubation.
	Elitech STC-1000Pro/STC-1000WiFi Smart Temperature Controller User Manual | Features, Operation, Setup User manual for Elitech STC-1000Pro and STC-1000WiFi smart digital temperature controllers. Learn about features, operation, parameter settings, installation, troubleshooting, and app connectivity for precise temperature management.

	Xetron STC-1000Pro TH Smart Temperature Controller Series User Manual Comprehensive user manual for the Xetron STC-1000Pro TH Smart Temperature Controller Series, detailing its features, operation, installation, and technical specifications for precise temperature and humidity control.
	Elitech STC-1000Pro/STC-1000WiFi Smart Temperature Controller User Manual User manual for the Elitech STC-1000Pro and STC-1000WiFi smart digital temperature controllers. Covers features, display, operation, parameter settings, installation, error codes, and app integration for precise temperature management.
	Xetron STC-1000Pro Smart Temperature Controller User Manual User manual for the Xetron STC-1000Pro smart digital temperature controller. Details features, operation, installation, and specifications for precise temperature control in applications like homebrewing, aquariums, and incubation.

Documents - Xetron – STC-1000Pro



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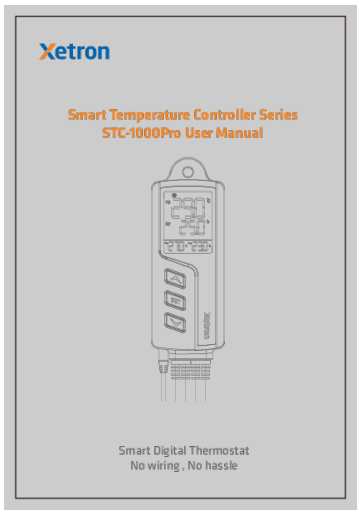

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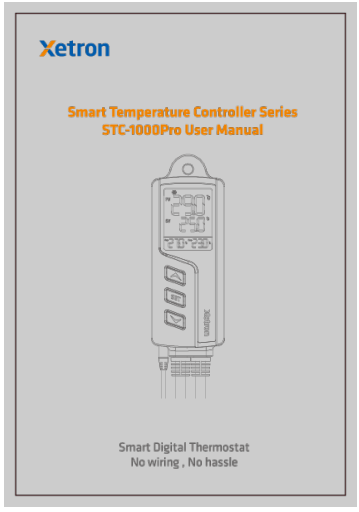

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