

Overview

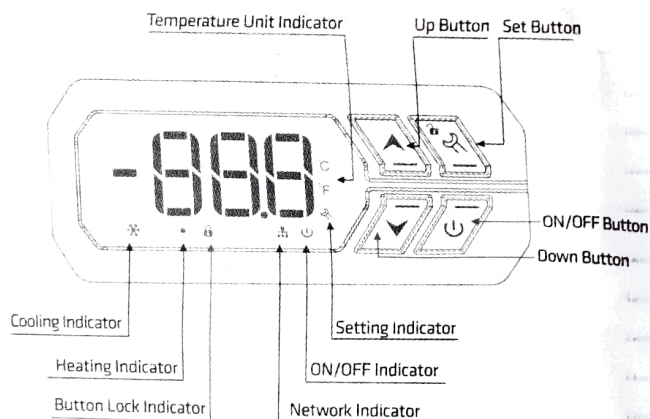
STC-1000X temperature controller features cooling and heating modes with automatic switch, temperature unit switch between Celsius and Fahrenheit, temperature control by set-point and differential, temperature calibration, cooling output protection delay, sensor fault alarm and other functions. The controller reserves an interface of RS-485 communication function for further connection to an Elitech IoT module which makes remote control available.

Specifications

Power Supply	Based on: 220V±10%, 50/60Hz; 110V±10%, 50/60Hz; 24VAC/DC; 12VAC/DC*
Measurement Range	-50°C~120°C/-55°F~248°F
Temperature Resolution	0.1°C
Temperature Accuracy	±1°C (-20°C~50°C)/±2°F, ±1.5°C/±3°F (others)
Total Power Consumption	< 3W
Operating Ambient Temperature	0°C~60°C
Storage Temperature	-30°C~75°C
Relative Humidity	20%~85%RH (non-condensing)
Relay Contact Output Rating	Cooling/Heating: 10A/250VAC
Sensor	NTC (10KΩ/25°C, B value = 3435K)
Waterproof Grade Of Front Panel	IP65
Panel Size	80 x 35 mm
Mounting Size	71 x 29 mm
Product Size	80 x 35 x 66 mm
Sensor Cable Length	2m (probe length included)

* The details should be refer to the wiring diagram of actual device.

Operation & Display Panel



Button Instructions

	Hold for 3 seconds. Turn ON/OFF; Press and release: Back to previous menu.
	Press and release: Display temperature set-point and back to normal display after 2 seconds.
	Press and release: Display temperature differential set-point and back to normal display after 2 seconds.
	Hold for 3 seconds. Unlock the keyboard or enter parameter setting mode.

Quick Start

1. Unlock the keyboard

Under normal operating status, the buttons will be locked after 10 seconds of inactivity, and the button lock indicator will be on. Hold button for more than 3 seconds to unlock the buttons and will be off.

2. View parameters

Under normal operating status, press and release button to display the temperature set-point; press and release button to display the temperature differential set-point. The controller will be back to normal display status after 2 seconds.

3. Set parameters

Under normal operating status, press and hold button for more than 3 seconds to enter parameter setting mode. The indicator will be on and the first code F1

will be displayed in the panel. Press or button to scroll up or down menu items and display the corresponding code. Press button to display the current parameter set-point. Press or button again to increase or decrease the value and press to back to parameter code display.

If you need to save the settings, please press and release button and back to normal display status. If not, just keep the controller inactive for 10 seconds, it will be back to temperature display status. If an error occurs during saving settings, the panel will display **Er** and back to temperature display status in 3 seconds.

4. Operations

Under normal operating status, the panel displays currently measured temperature and automatically recognizes and switches cooling and heating modes.

- If measured temperature \geq temperature set-point + temperature differential, and compressor delay time \geq F3, the controller starts cooling mode and indicator is on.
- If measured temperature \leq temperature set-point, the controller stops cooling and indicator is off.
- If measured temperature \leq temperature set-point - temperature differential, the controller starts heating mode and indicator is on.
- If measured temperature \geq temperature set-point, the controller stops heating and indicator is off.

5. ON/OFF

Hold the power button for more than 3 seconds to turn on/off the controller.

Menu

Code	Function	Setting Range	Default	Remark
F1	Temperature Set-point	-49~109°C/-56~228°F	10°C/50°F	
F2	Temperature Differential	1~10°C/33~50°F	3°C/37°F	
F3	Compressor Start Delay	0~10 min	3	
F4	Temperature Calibration	-10°C~10°C/-10~10°F	0°C/0°F	
F5*	Temperature Unit	0: °C 1: °F	0	
F6	Communication Address	1~127	1	Reserved

*Please disconnect the load before switching the temperature display unit.

Fault & Alarm

When the temperature sensor is short circuit or open circuit, the controller will start fault **alarm** mode and turn off all the outputs, the buzzer will beep and the panel will display **EE**. Press any button to mute the buzzer.

The controller will return to normal operating mode after the fault is removed.

Safety Precautions

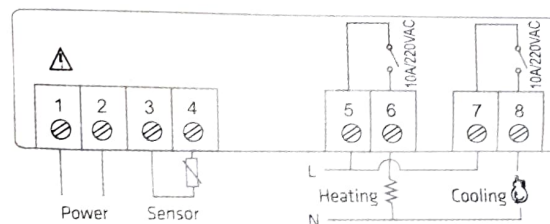
Important!

1. Distinguish the sensor lead, power cord and output relay interface. Do not connect wrong or overload the relay.
2. Cut off power supply before wiring.

Warning!

Do not use the controller in water or too humid environment, or environments at high temperature, with strong electromagnetic interference or strong corrosion.

Wiring Diagram



Caution!

1. The power voltage must be in accordance with the voltage labeled on the controller. Please ensure the stability of power voltage.
2. Separate as much as possible the sensor lead from power cables to avoid possible electromagnetic disturbance.