INKBIRD ITC-1000F Temperature Controller Instruction Manual

Contents

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INKBIRD ITC-1000F Temperature Controller

Product Specifications

- **Main Function:** To control and monitor various electrical systems.
- **Mounting Dimension:** Fits standard mounting dimensions of 120mm x 80mm.
- **Technical Parameter:**
  - **Voltage**: 110-240V,
  - **Frequency**: 50/60Hz, Power: 5W.

Product Usage Instructions

- **Safety Precautions**
  Before using the product, please read the safety precautions section in the manual carefully to ensure safe operation.
- **Panel Instruction**
  The panel displays vital information such as system status, temperature, and settings. Refer to the panel instructions to understand the displayed information.
- **Key Operating Instruction**
  Use the provided keys to navigate through the menu options and make selections. Follow the key operating instructions for proper usage.
- **Operating Instruction**
  Follow the operating instructions to turn the system on/off, adjust settings, and monitor performance.
- **Menu Instruction**
  Access different menus to customize settings and preferences. Refer to the menu instructions for detailed guidance.
- **Error Description**
  If you encounter errors or malfunctions, refer to the error description section to troubleshoot and resolve issues.
- **Wiring Diagram**
  Consult the wiring diagram to correctly connect the product to the electrical system. Incorrect wiring can lead to damage or malfunction.
- **Troubleshooting Guide**
  If you face any difficulties with the product, refer to the troubleshooting guide for step-by-step solutions to common problems.

Please keep this manual properly for reference. You can also scan the QR code to visit our official website for product usage videos. For any usage issues, please feel free to contact us at **support@inkbird.com**.

Warm tips

- To quickly jump to a specific chapter page, click on the relevant text on the contents page.
- You can also use the thumbnail or document outline in the top left corner to quickly find a specific page.

Thank you very much for selecting INKBIRD products. Read the instruction manual carefully before use, for right application and maintenance.

Safety Precautions:

- Ensure the product using within the specification.
- Do not touch when electrified. Otherwise, it may cause personal injury due to electric shock.
- Do not allow metal fragments, wire clippings or fine metal shaving or filing to enter the product during installation. Otherwise, it may lead to electric shock, fire or malfunction.
- Do not use this product in the environment of flammable and explosive gases. Otherwise, explosive damage may occur.
- Do not touch any internal parts while disassembling, modifying or repairing the product. Otherwise, failure, electric shock or fire may occur.
- If the output relays are used past their life expectancy, contact fusing or burning may occasionally occur. Always consider the application conditions and use the output relays within their rated load and electrical life expectancy. The life expectancy of output relays varies considerably with the output load and switch conditions.

Main Function

- Fahrenheit and Celsius display can be be chosen;
- More user-friendly operating;
- Switch between cooling and heating modes;
- Control the temperature by setting the temperature set value and the difference value;
- Temperature calibrating;
- Refrigerating control output delay protection;
- Alarm when temperature exceeds the limit or the sensor is faulty;

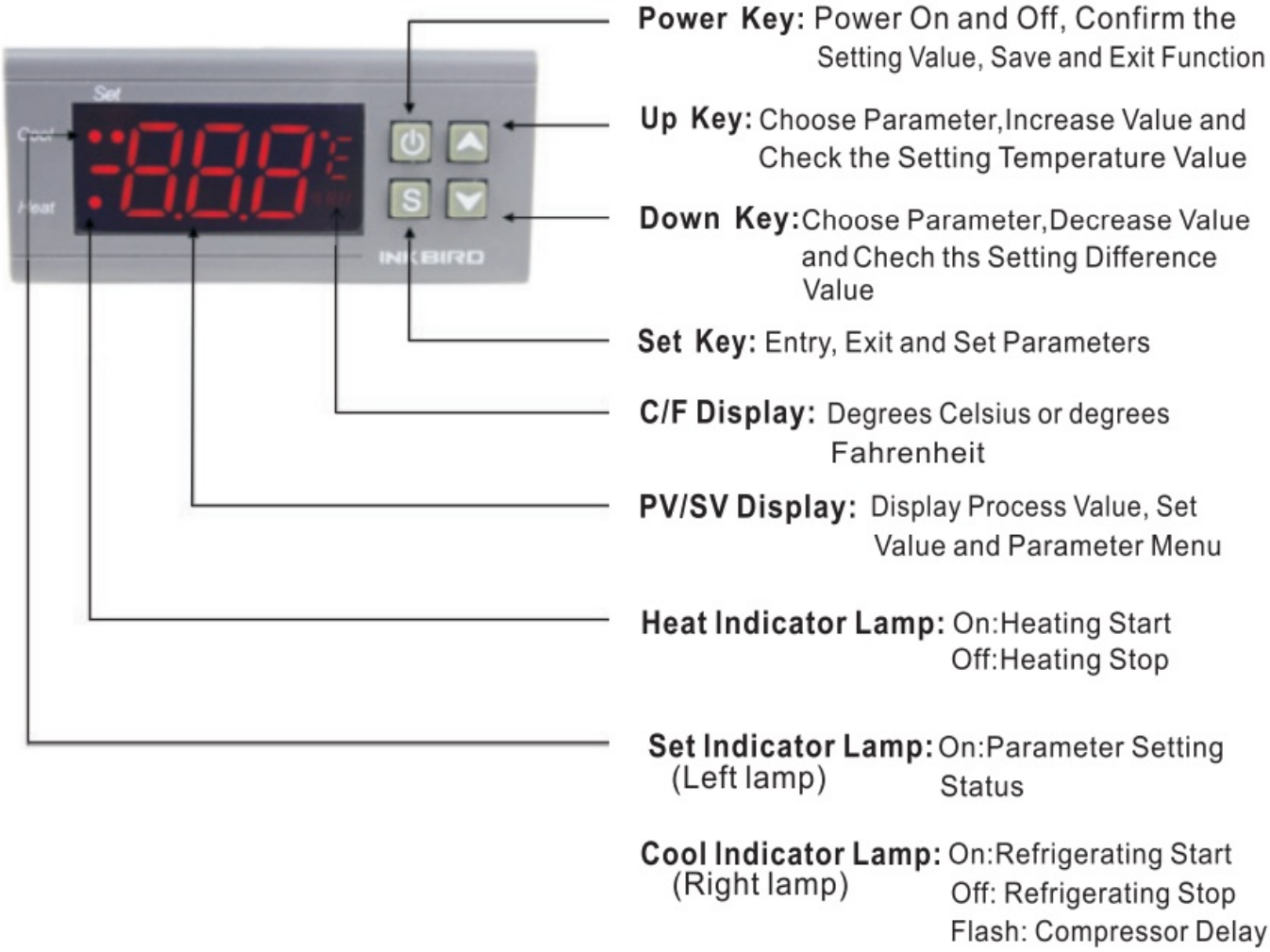
Mounting dimension

- Front Panel Size: 75(L)*34.5(W)mm
- Mounting Size: 71(L) *29(W)mm
- Product Size : 75(L)*34.5(W)*85(D)mm
- Sensor Length: 2m (include the probe)

Technical Parameter

- Temperature Measuring Range: -50~210 °F / -50°C-99 °C
- Resolution: 0.1 °F / 0.1 °C
- Accuracy: 1 °F(-50 °F – 160 °F) / #1 °C(-50°C -70 °C)
- Power Supply: 220VAC 50Hz/60Hz
- Power Consumption: <3W
- Sensor: NTC Sensor
- Relay Contact Capacity: Cooling (10A/250VAC) / Heating (10A/250VAC);
- Ambient Temperature: 0 °C-60 °C
- Storage Temperature: -30 °C-75 °C
- Relative Humidity: 20-85% (No Condensate)

Panel Instruction



Key Operating instruction

Check Parameter:
In normal working status, press “▲” key once, it will display the setting temperature value; press “▼” key once, it will display the difference value;

Parameter Setting:

- In normal working status, keep pressing ” S” for more than 3s to enter set mode, set indicator lamp is on, screen displays the first menu code “TS”
- Press “▲” key or “▼” key to move up or down the menu item and display the menu code.
- Press ” S” key to enter the parameter setting of current menu, the parameter value starts to flash.
- Press “▲” key or “▼” key to adjust the parameter value of current menu.
- After the set, press “S” key to exit the parameter setting of current menu, the parameter value stops to flash. User can set the other functions as above steps.
- In any status, press “ ⏻ ” key to save the parameter modified value, and return to the normal temperature value. If no operating within 10s, it will exit the menu automatically and return to normal temperature display status, and does not save the parameter of this modification.

Operating instruction

- In normal working status, press and hold ” ⏻ ” key for more than 3s to turn off the controller; in Power-off Status, press and hold “ ⏻ ” key for more than 1s to turn on the controller.
- In normal working status, screen displays the current measuring value, the controller switch modes between heating and cooling automatically. If the measuring temperature ≥ temperature set value + difference set value, the controller starts refrigerating, the cool indicator lamp lights on, and the refrigerating relay is connected. When cool indicator lamp flashes, indicating that the refrigerating device is under compressor delay protecting status.
- If the measuring temperature ≤ temperature set value, the cool indicator lamp turns off, and the refrigerating relay is disconnected.
- If the measuring temperature ≤ temperature set value difference set value, the controller starts heating, the heat indicator lamp lights on, and the heating relay is connected.
- If the measuring temperature ≥ temperature set value, the heat indicator lamp turns off, and the heating relay is disconnected.

Menu Instruction

When the set temperature is degrees Celsius (FC → C)

Code	Function	Setting Range	Default Value
TS	Temperature Set Value	-50 ~ 99.9 °C	10.0 °C
DS	Difference Set Value	0.3 ~ 15 °C	1.0 °C
PT	Compressor Delay	0 ~ 10 minutes	3 minutes
CA	Temperature Calibration	-15 °C ~ 15 °C	0 °C
CF	Value	Fahrenheit or Celsius	Celsius

When the set temperature is degrees Fahrenheit (FC → F)

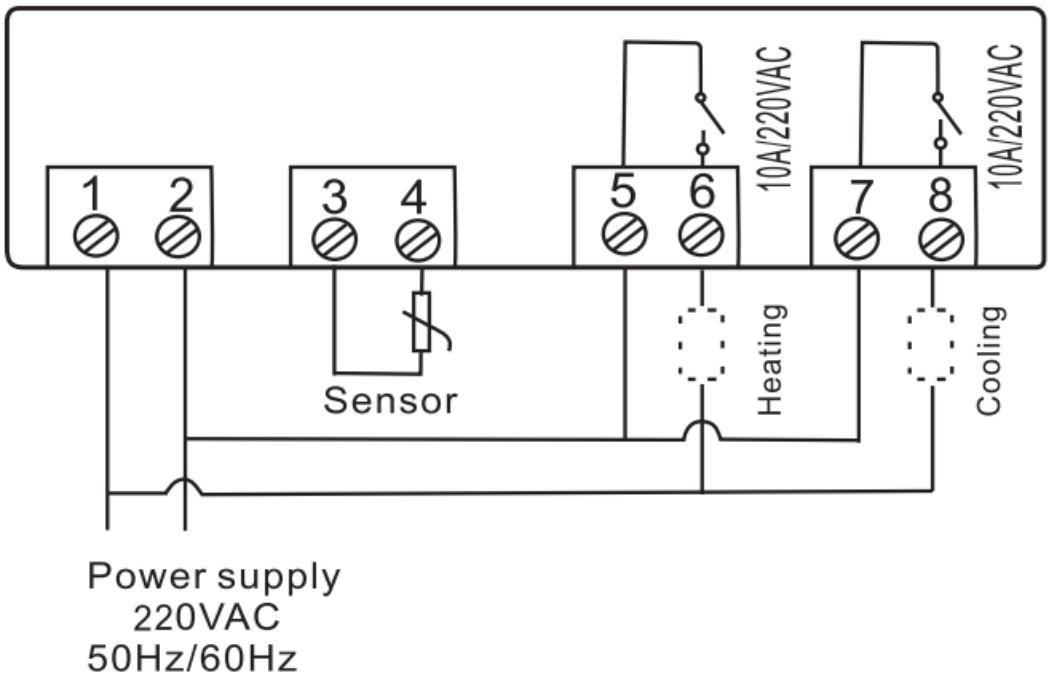
Code	Function	Set Range	Default Value	Note
TS	Temperature Set Value	-50 ~ 210 °F	50 °F	Min. Unit: 1 °F
DS	Difference Set Value	1 ~ 30 °F	3 °F	Min. Unit: 1 °F
PT	Compressor Delay	0 ~ 10 minutes	3 minutes	
CA	Temperature Calibration Value	-15 ~ 15 °F	0 °F	
CF	Fahrenheit or Celsius Setting	Fahrenheit or Celsius	F	

Note:
When CF value change, all the set values restore to defaultvalue.

Error Description

- Sensor Error Alarm: When the temperature sensor circuit is short circuit or open circuit, the controller starts sensor error mode and closes all running status, the buzzer alarm sounds, screen displays ER. Press any keys can cancel buzzer alarm, the system returns to the normal working status after error is cleared.
- Over-temperature Alarm: When the measuring temperature exceeds the temperature measuring range, the controller starts over-temperature error alarm mode and closes all running status, the buzzer alarm sounds, screen displays HL. Press any keys can cancel buzzer alarm, the system returns to the normal working status after the temperature returns to measuring range.

Wiring Diagram



Troubleshooting Guide

Issues	Causes	Solutions
The probe reading is incorrect.	1. The probe is placed in an area with poor temperature circulation.	1. Adjust the position of the probe.
	2. The probe is damaged.	2. If the probe was used in liquids, dry it using a hairdryer and then test it at room temperature.
		3. Check if the probe is intact.
		4. If the deviation is small, use the CA function to calibrate.
Cannot enter setting mode.	1. The program is not responding.	1. Unplug the controller.
	2. There is a problem with the button.	2. Press and hold the ‘SET’ button.
		3. Plug the controller back in and release the ‘SET’ button when power is applied.
		4. The unit will enter test mode. Press the ‘up’ and ‘down’ buttons alternately.
		5. Unplug the controller again and plug it back in without pressing the ‘SET’ button. The device should now enter normal mode.
		If it still does not work, please contact customer service.

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- **Email**: support@inkbird.com

FAQ

Q: How do I reset the device?
A: To reset the device, press and hold the reset button for 10 seconds until the device restarts.

Q: Can I use the product outdoors?
A: This product is designed for indoor use only. Avoid exposing it to moisture or extreme temperatures.

Documents / Resources

	INKBIRD ITC-1000F Temperature Controller [pdf] Instruction Manual ITC-1000F, ITC-1000F 220Vac, ITC-1000F Temperature Controller, ITC-1000F, Temperature Controller, Controller

References

- User Manual