INKBIRD ITC-1000F Digital Temperature Controller User Manual

Contents

INKBIRD ITC-1000F Digital Temperature Controller

Inkbird Tech. Co., Ltd.

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Safety Precautions

- Ensure the product is within the specification.
- Do not touch the terminals at least while power is being supplied. Doing so may occasionally result in injury due to electric shock.
- Do not allow pieces of metal, wire clippings, or fine metallic shaving or filings from installation to enter the product. Doing so may occasionally result in electric shock, fire, or malfunction.
- Do not use the product where subject to flammable or explosive gas. Otherwise, injury from explosions may occasionally occur.
- Never disassemble, modify, or repair the product or touch any of the internal parts. Electric Shock, fire, or malfunction may occasionally 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.

Specification

Main features

- Fahrenheit and Celsius Display Can Be Choose;
- 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 When Sensor Error;

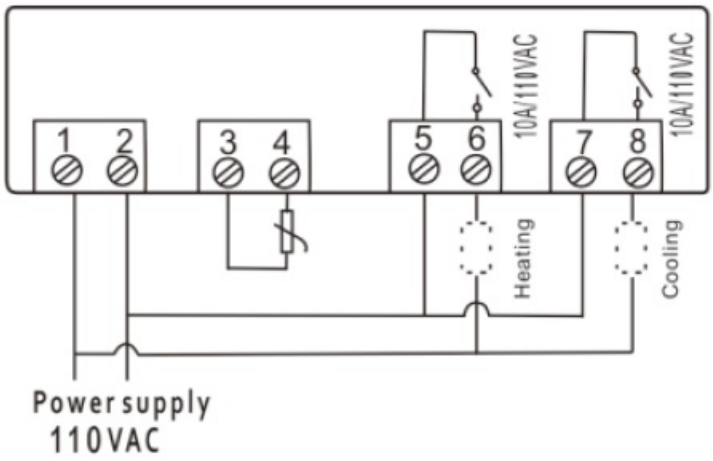
Mounting dimension:

- **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)

Temperature Measuring Range	-50 210 ºF / -50 ºC-99 ºC
Resolution	0.1 oF / 0.1 ºC
Measuring Accuracy	±1 ºF -50 ºF -160 ºF / ±1 ºC -50 ºC -70 ºC
Power Supply	110Vac/220Vac 50Hz/60Hz, 12Vdc
Power Consumption	<3W
Sensor	NTC Sensor
Relay Contact Capacity	Cooling (10A/250VAC)/ Heating (10A/250VAC)
Ambient Temperature	0 ºC – 60 ºC
Storage Temperature	-30 ºC – 75 ºC
Relative Humidity	20-85% (No Condensate)
Warranty	1 Year

Wiring Diagram

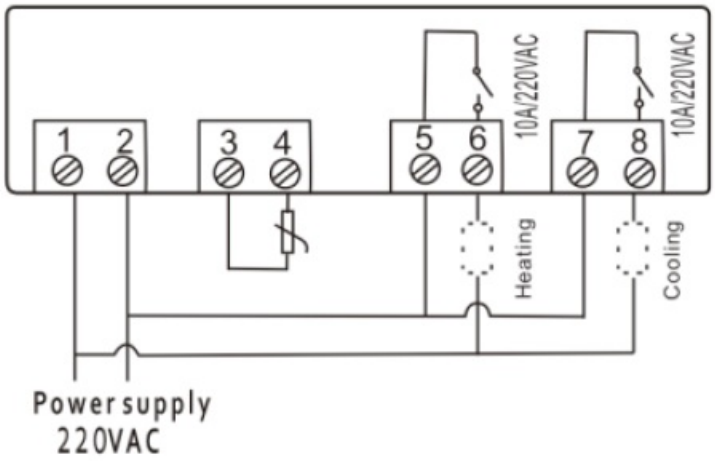
ITC-1000F-110V



Note

- Strictly distinguish the interface of the relay, sensor, and power
- Strictly distinguish the connection between the sensor and the power
- Sensor down-lead and power wire should be kept at a proper distance

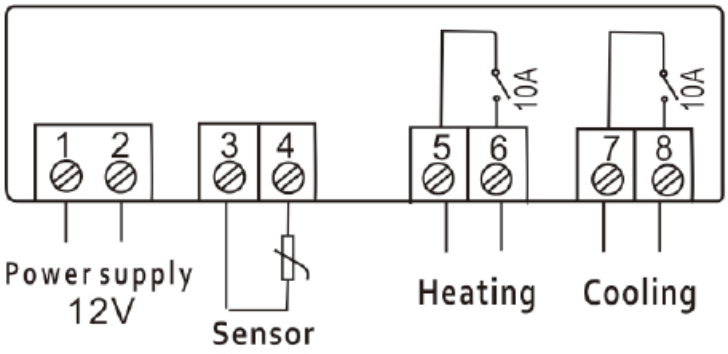
ITC-1000F-220V



Note:

- Strictly distinguish the interface of the relay, sensor, and power
- Strictly distinguish the connection between the sensor and the power
- Sensor down-lead and power wire should be kept at a proper distance

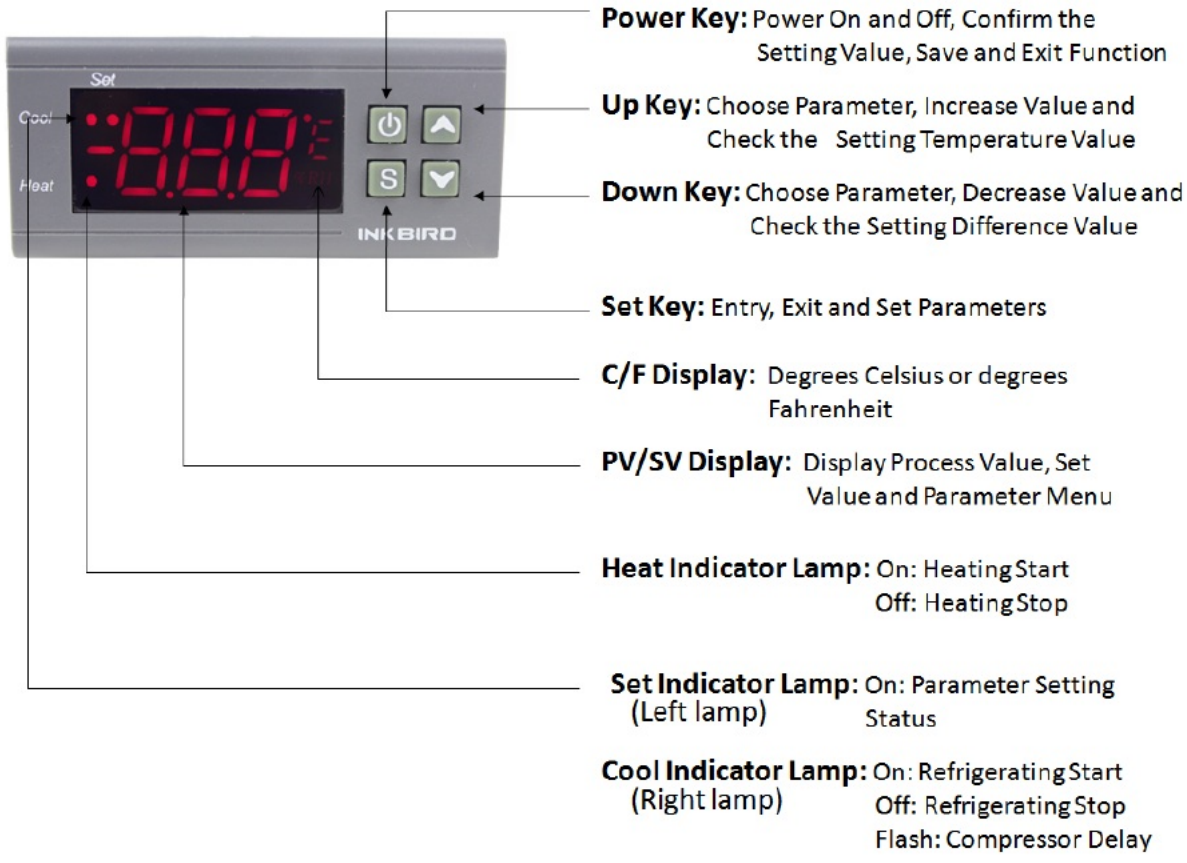
ITC-1000F-12V



Note:

- Strictly distinguish the interface of the relay,sensor, and power
- Strictly distinguish the connection between the sensor and the power
- Sensor down-lead and power wire should be kept at a proper distance

Keys Instruction



Key Operation Instruction

Check Parameter:

- In normal working status, press “ ▲ ” key once, it will display the setting temperature value; press “ ▼ ” key once, and 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, and the 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 the current menu, and the parameter value starts to flash.
- Press “▲” key or “▼” key to adjust the parameter value of the current menu.
- After the set, press “S” key to exit the parameter setting of the current menu, and the parameter value stops flashing. Users 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, the screen displays the current measuring value, and the controller switches 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 the cool indicator lamp flashes, indicating that the refrigerating device is under compressor delay protected 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	Set range	Default	Note
TS	Temperature Set Value	-50 99.9 ºC	10.0 oC	
DS	Difference Set Value	0.3 15 ºC	1.0 oC	
PT	Compressor Delay	0 10 minutes	3munites	
CA	Temperature Calibration Value	-15 ºC 15 ºC	0 ºC	
CF	Fahrenheit or Celsius Setting		C	

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

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

Note: When the CF value changes, all the set values restore to the default value.

Error Description

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

Technical Assistance and Warranty

Technical Assistance

- If you have any problems installing or using this thermostat, please carefully and thoroughly review the instruction manual. If you require assistance, please write us at **cs@ink-bird.com**. We will reply to your emails in 24 hours from Monday through Saturday.
- You can also visit our website **www.ink-bird.com** to find the answers to common technical questions.

Warranty

- INKBIRD TECH. C.L. warrants this thermostat for one year from the date of purchase when operated under

normal conditions by the original purchaser (not transferable), against defects caused by INKBIRD's workmanship or materials. This warranty is limited to the repair or replacement, at INKBIRD's discretion, of all or part of the thermostat. The original receipt is required for warranty purposes.

- INKBIRD is not responsible for injury property damage or other consequential damages or damages of third parties arising directly from an actual or alleged matter of workmanship of the product.
- There are no representations, warranties, or conditions, express or implied, statutory or otherwise, other than herein contained in the Sale of Goods Act or any other statute.

Contact Us

- **Business Contact:** sales@ink-bird.com
- **Technical Support:** cs@ink-bird.com
- **Business Hours:** 09:00-18:00(GMT+8) from Monday to Friday
- **URL:** www.ink-bird.com

Inkbird Tech. Co., Ltd. www.ink-bird.com

FREQUENTLY ASKED QUESTIONS

INKBIRD ITC-1000F Digital Temperature Controller

The digital temperature controller described is the INKBIRD ITC-1000F Digital Temperature Controller.

What is the voltage requirement for the INKBIRD ITC-1000F Digital Temperature Controller?

The voltage requirement for the INKBIRD ITC-1000F Digital Temperature Controller is 110 Volts.

What is the weight of the INKBIRD ITC-1000F Digital Temperature Controller?

The weight of the INKBIRD ITC-1000F Digital Temperature Controller is 222 grams.

What is the temperature measuring range of the INKBIRD ITC-1000F Digital Temperature Controller?

The temperature measuring range of the INKBIRD ITC-1000F Digital Temperature Controller is -58210°F / -5099°C.

What is the resolution of the temperature measurement for the INKBIRD ITC-1000F Digital Temperature Controller?

The resolution of the temperature measurement for the INKBIRD ITC-1000F Digital Temperature Controller is 0.1°F / 0.1°C.

What is the accuracy of the temperature measurement for the INKBIRD ITC-1000F Digital Temperature Controller within the range of -58~160°F?

The accuracy of the temperature measurement for the INKBIRD ITC-1000F Digital Temperature Controller within the range of -58~160°F is ±2°F.

What is the power supply requirement for the INKBIRD ITC-1000F Digital Temperature Controller?

The power supply requirement for the INKBIRD ITC-1000F Digital Temperature Controller is 110VAC 50Hz/60Hz.

What is the power consumption of the INKBIRD ITC-1000F Digital Temperature Controller?

The power consumption of the INKBIRD ITC-1000F Digital Temperature Controller is 3W.

What type of sensor does the INKBIRD ITC-1000F Digital Temperature Controller use?

The INKBIRD ITC-1000F Digital Temperature Controller uses an NTC sensor.

What are the relay contact capacities for cooling and heating of the INKBIRD ITC-1000F Digital Temperature Controller?

The relay contact capacities for cooling and heating of the INKBIRD ITC-1000F Digital Temperature Controller are 10A/250VAC each.

What is the relative humidity range for the operation of the INKBIRD ITC-1000F Digital Temperature Controller?

The relative humidity range for the operation of the INKBIRD ITC-1000F Digital Temperature Controller is 20~85%.

What are the dimensions of the front panel of the INKBIRD ITC-1000F Digital Temperature Controller?

The dimensions of the front panel of the INKBIRD ITC-1000F Digital Temperature Controller are 75(L)*34.5(W)mm.

What are the mounting dimensions required for the INKBIRD ITC-1000F Digital Temperature Controller?

The mounting dimensions required for the INKBIRD ITC-1000F Digital Temperature Controller are 71(L)*29(W)mm.

Who is the manufacturer of the INKBIRD ITC-1000F Digital Temperature Controller?

The manufacturer of the INKBIRD ITC-1000F Digital Temperature Controller is Inkbird Tech.

What is the price and warranty period for the INKBIRD ITC-1000F Digital Temperature Controller?

The price of the INKBIRD ITC-1000F Digital Temperature Controller is $19.99, and it comes with a 1-year warranty.

DOWNLOAD THE PDF LINK: INKBIRD ITC-1000F Digital Temperature Controller User Manual

References

- User Manual