All-Purpose Temperature Controller

ITC-1000F

User Manual

Version 1.0s

INKBIRD

Inkbird Tech. Co., Ltd.

Copyright

Copyright© 2016 Inkbird Tech. Co., Ltd. All rights reserved. No part of this document may be reproduced without prior written permission.

Disclaimer

Inkbird has made every effort to ensure that the information contained in this document is accurate and complete; however, the contents of this document are subject to revision without notice. Please contact Inkbird to ensure you have the latest version of this document.

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

Contents

1. Safety Precautions 3
2. Specification 4
Main features 4
Mounting dimension 4
3. Wiring Diagram 5
3.1 ITC-1000F-110V 5
3.2 ITC-1000F-220V 5
3.3 ITC-1000F-12V 5
4. Keys Instruction 6
5. Key Operation Instruction 6
5.1 Check Parameter 6
5.2 Parameter Setting 6
5.3 Operating instruction 7
6. Menu Instruction 8
6.1 When the set temperature is degrees Celsius (FC→C) 8
6.2 When the set temperature is degrees Fahrenheit (FC→F) 8
7. Error Description 9
Sensor Error Alarm 9
Over-temperature Alarm 9
8. Technical Assistance and Warranty 10
8.1 Technical Assistance 10
8.2 Warranty 10

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

1. Safety Precautions

- Ensure the product using 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 explosion 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.

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

2. 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:

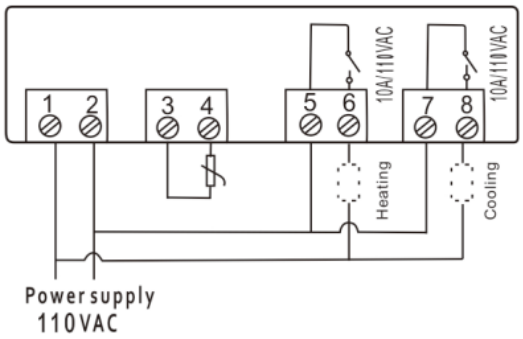
- Front Panel Size: 75(L)*34.5(W)mm
- Mounting Size: 71(L)*29(W)mm
- Product Size：75(L)*34.5(W)*85(D)mm
- Sensor Length: 2m (include the probe)

Temperature Measuring Range	-50～210 °F / -50 °C-99 °C
Resolution	0.1 °F / 0.1 °C
Measuring Accuracy	±1 °F（-50 °F -160 °F）/ ±1 °C（-50 °C -70 °C）
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 °C - 60 °C
Storage Temperature	-30 °C - 75 °C
Relative Humidity	20-85% (No Condensate)
Warranty	1 Year

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

3. Wiring Diagram

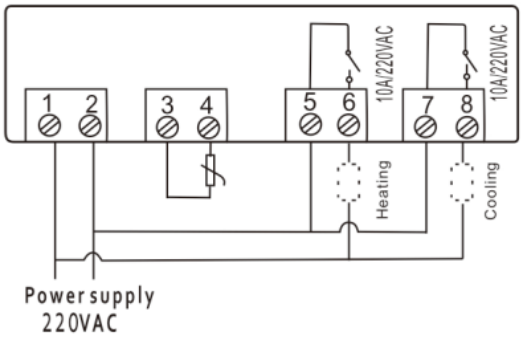
3.1 ITC-1000F-110V



Note:

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

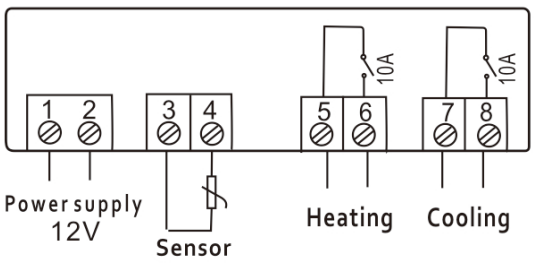
3.2 ITC-1000F-220V



Note:

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

3.3 ITC-1000F-12V



Note:

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

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

4. Keys Instruction

Power Key: Power On and Off, Confirm the Setting Value, Save and Exit Function

Up Key: Choose Parameter, Increase Value and Check the Setting Temperature Value

Down Key: Choose Parameter, Decrease Value and Check the Setting Difference Value

Set Key: Entry, Exit and Set Parameters

C/F Display: Degrees Celsius or degrees Fahrenheit

PV/SV Display: Display Process Value, Set Value and Parameter Menu

Heat Indicator Lamp: On: Heating Start
Off: Heating Stop

Set Indicator Lamp: (Left lamp) On: Parameter Setting Status

Cool Indicator Lamp: (Right lamp) On: Refrigerating Start
Off: Refrigerating Stop
Flash: Compressor Delay

5. Key Operation Instruction

5.1 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;

5.2 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.

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

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.

5.3 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.

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

6. Menu Instruction

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

Code	Function	Set range	Default	Note
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	3munites	
CA	Temperature Calibration Value	-15 °C～15 °C	0 °C	
CF	Fahrenheit or Celsius Setting		C	

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

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

Note:

When CF value change, all the set values restore to default value.

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

7. 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.

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417

8. Technical Assistance and Warranty

8.1 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 to cs@ink-bird.com. We will reply your emails in 24 hours from Monday through Saturday.
You can also visit our web site www.ink-bird.com to find the answers of the common technical questions.

8.2 Warranty

INKBIRD TECH. C.L. warrants this thermostat for one years from the date of purchase when operated under normal condition 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 in mater 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 statue.

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

Conseguilo en: https://gmelectronica.com.ar (011) 4953-0417