INKBIRD

SMART HOME SMART LIFE

ITC-308-WIFI

Smart Controller Manual

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01 CAUTION

- KEEP CHILDREN AWAY.
- TO REDUCE THE RISK OF EL ECTRIC SHOCK, USE ONLY INDOORS.
- RISK OF ELECTRIC SHOCK, DO NOT PLUG INTO ANOTHER RELOCATABLE POWER TAPS OR AN EXTENSION CORD.
- USE ONLY IN DRY LOCATION.
- USING TGE LNKBIRD CONTROLLERWITHIN 10A,110V OR 230V.
- NORMALLY, LIFE OF THE RELAY IS 100,000 TIMES. IF HEATING OR COOLING SWITCHES FREQUENTLY WHEN USING, SERVICE LIFE GET SHORTER. PLEASE REPLACE THE OLD CONTROLLER WITH A NEW ONE ACCORDING TO SPECIFIC USING CONDITION, JUST IN CASE OF LOSS OR DAMAGE CAUSED BY THE DAMAGED RELAY.

02 Specification

- Plug-n-play, easy to use.

- Dual relay output, which can connect heating and cooling device at the same time.
- Support reading in Celsius or Fahrenheit.
- Dual screen display, can display test temperature and setting temperature simultaneously.
- Temperature calibration function.
- Delay protection for cooling.
- High and low temperature limit alarm can be set up.
- Probe abnormal alarm.
- WIFI Smart APP.

03 Technical Parameters

- Power: Voltage: 100~240Vac 50/60Hz, Current: 10A, Max Wattage: 1200W(120Vac), 2200W(220Vac)
- Type of temperature probe: R25°C =10KΩ±1%, R0°C=26.74~27.83KΩ, B25/85°C=3435K±1%
- Temperature measurement range: -40°C~100°C/-40°F~212°F
- Temperature display accuracy:

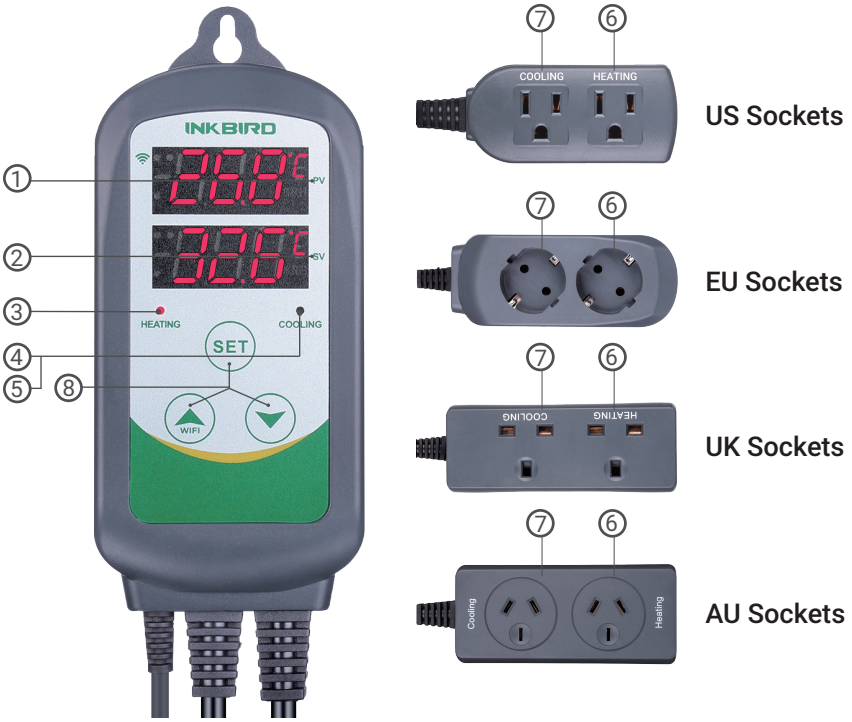
0.1 ℃/℉(<100℃/℉), 1℃/℉(>=100℃/℉)

- Temperature measurement accuracy:

Range of Temperature(T)Celsius	Celsius Error	Range of Temperature(T)Fahrenheit	Fahrenheit Error
-40℃≤T<10℃	±2℃	-40℉ ≤T<50℉	±3℉
10℃≤T<80℃	±1℃	50℉ ≤T<176℉	±2℉
80℃≤T≤100℃	±2℃	176℉ ≤T≤212℉	±3℉

- Display unit: Celsius ℃ or Fahrenheit ℉
- Ambient temperature: -20°C~60°C/ -4°F~140°F
- Storage environment: temperature: 0°C~60°C/32°F~140°F; humidity: 20~80%RH(Unfrozen or condensastate)
- Warranty:
  Contoller:2 years warranty
  Temperature Probe:1 year warranty

04 Get to Know the Device



① **PV:** In normal mode, it displays current temperature; in settings mode, it displays menu code.

② **SV:** In normal mode, it displays the temperature setting value; in the setting mode, it displays the setting value.

③ **Red Light ON:** Heating output is on.

④ **Green Light ON:** Cooling output is on.

⑤ **Green Light Blinks:** The controller is performing the function of compressor delay.

⑥ **HEATING:** Heating output socket.

⑦ **COOLING:** Cooling output socket.

⑧ **Setting button(SET)**，**Increase button (WIFI)**，**Decrease button(⌄):** More details on Control Function Instructions.

05 INKBIRD APP Setting

5.1 Download the APP

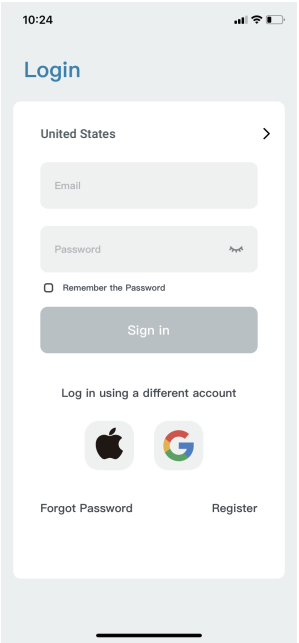
Search the keyword “**INKBIRD**” in Appstore or Google Play, or scan the following QR code to download and install the APP.

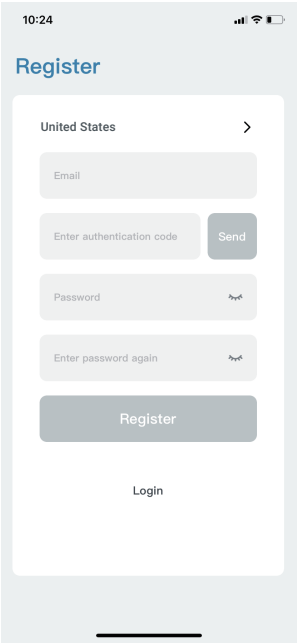
INKBIRD APP

5.2 Pair with your phone

① Open the app, it will ask you to register or log in your account on the APP. Select the country and enter your Mobile number or Email to finish the registration. Then press

“Add Home”button to create your home.



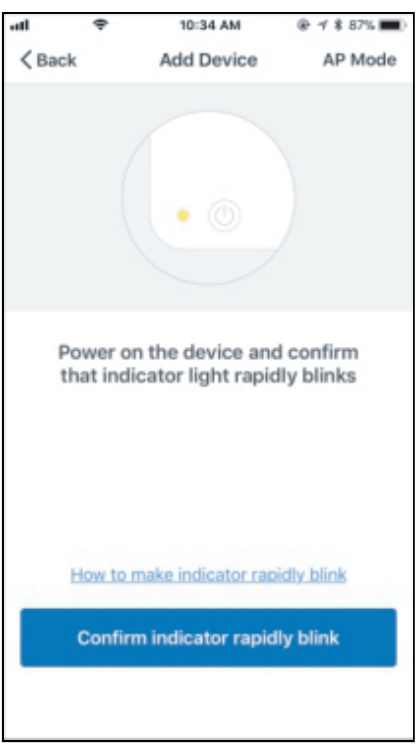


② Tap “+" or “add device" button in home page of the APP to add the device.

③ If the controller is in the normal working state, you can long press WIFI 2 seconds to reset the WIFI. It will enter the Smartconfig configuration state by default. You can short press WIFI to switch the Smartconfig configuration state and the AP mode. If you change the WIFI state, it will take about 5 seconds to display the corresponding LED symbol and state, because of the WIFI module data processing.

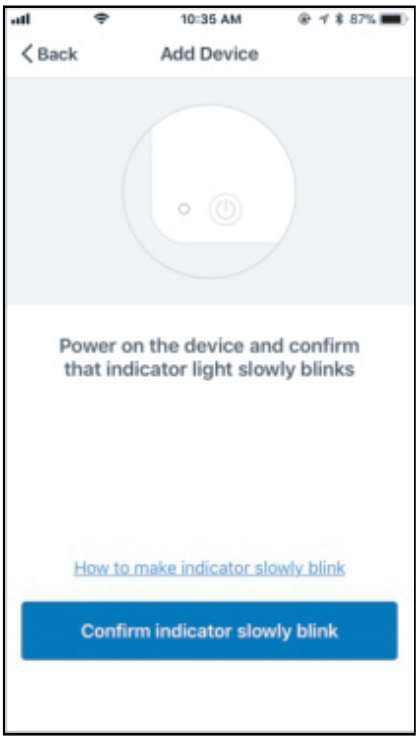
Add device in quick connection:

- Plug the device in the socket and make sure that the device is in the Smartconfig.
- configuration state (the LED symbol is flashing, interval flashing 250ms). Click “Confirm indicator rapidly blink" and then select Wi-Fi network, enter Wi-Fi password,click “confirm" to enter connection process.
- The device only supports 2.4GHz Wi-Fi router.



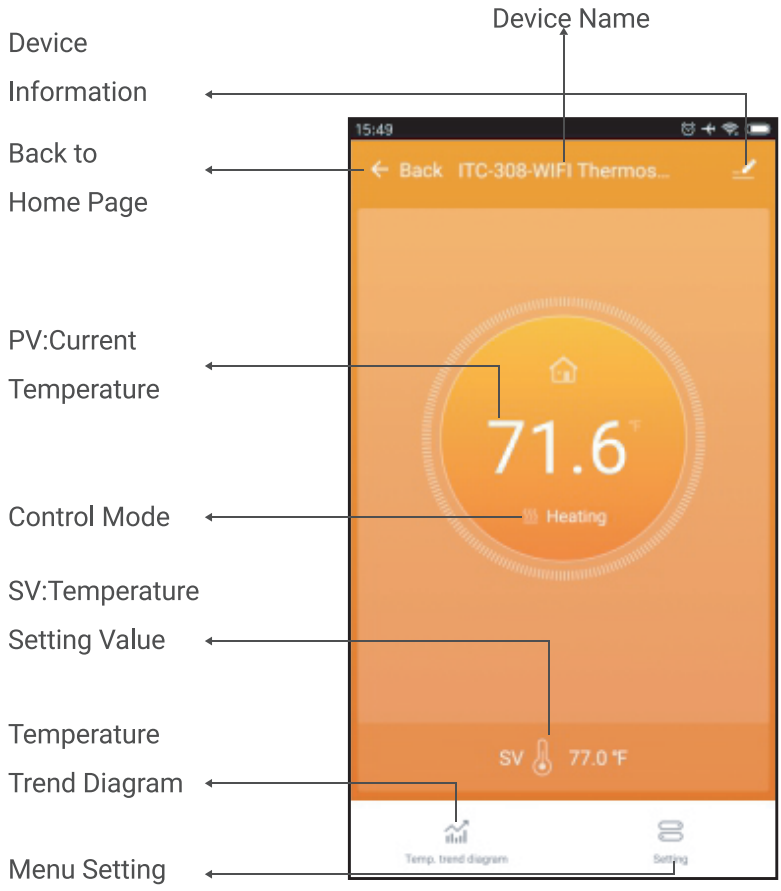
Add device in AP mode:

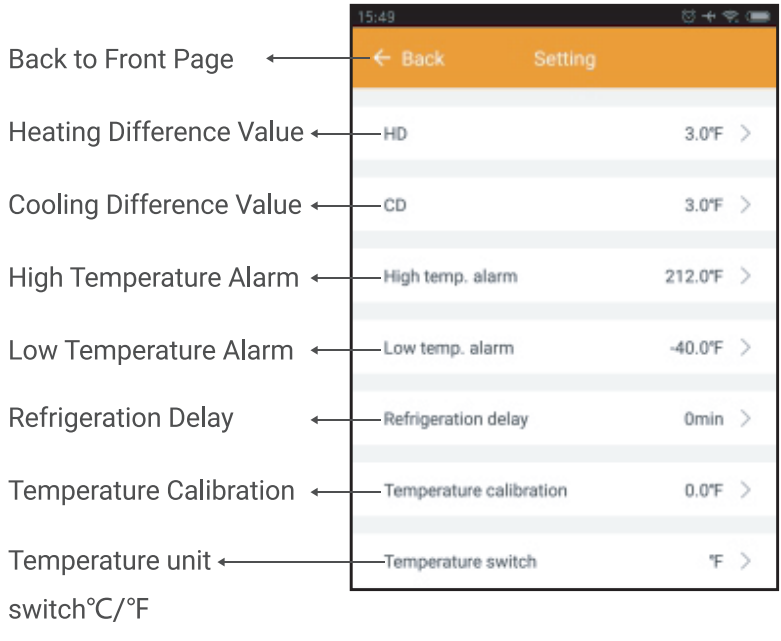
- Plug the device in the socket and make sure that the device is in the AP Configuration State (the LED symbol is flashing slowly, interval flashing 1500ms).
- Click “ ” to enter device adding interface,click “Confirm indicator slowly blink” and then select Wi-Fi network, enter Wi-Fi password,click “confirm” to enter connection process.
- Press “Connect now” and it will go to your WLAN Setting in your smart phone, select the “SmartLife-XXXX” to directly connect to the router without putting in password.
- Go back to app to enter into the automatic connection interface.



④ Click “Done” after adding device succeedfully and enter into device controlling interface .

⑤ In the temperature control mode, user can set control function via APP.


Device Name
Device Information
Back to Home Page
PV:Current Temperature
Control Mode
SV:Temperature Setting Value
Temperature Trend Diagram
Menu Setting
15:49
Back
ITC-308-WIFI Thermos...
71.6
Heating
SV
77.0 °F
Temp. trend diagram
Setting


Back to Front Page
Heating Difference Value
Cooling Difference Value
High Temperature Alarm
Low Temperature Alarm
Refrigeration Delay
Temperature Calibration
Temperature unit switch℃/°F
15:49
Back
Setting
HD
3.0°F
CD
3.0°F
High temp. alarm
212.0°F
Low temp. alarm
-40.0°F
Refrigeration delay
0min
Temperature calibration
0.0°F
Temperature switch
°F

06 Control Function Instructions

6.1 Button Operation Instructions

6.1.1 Button Function in Normal Operation Mode

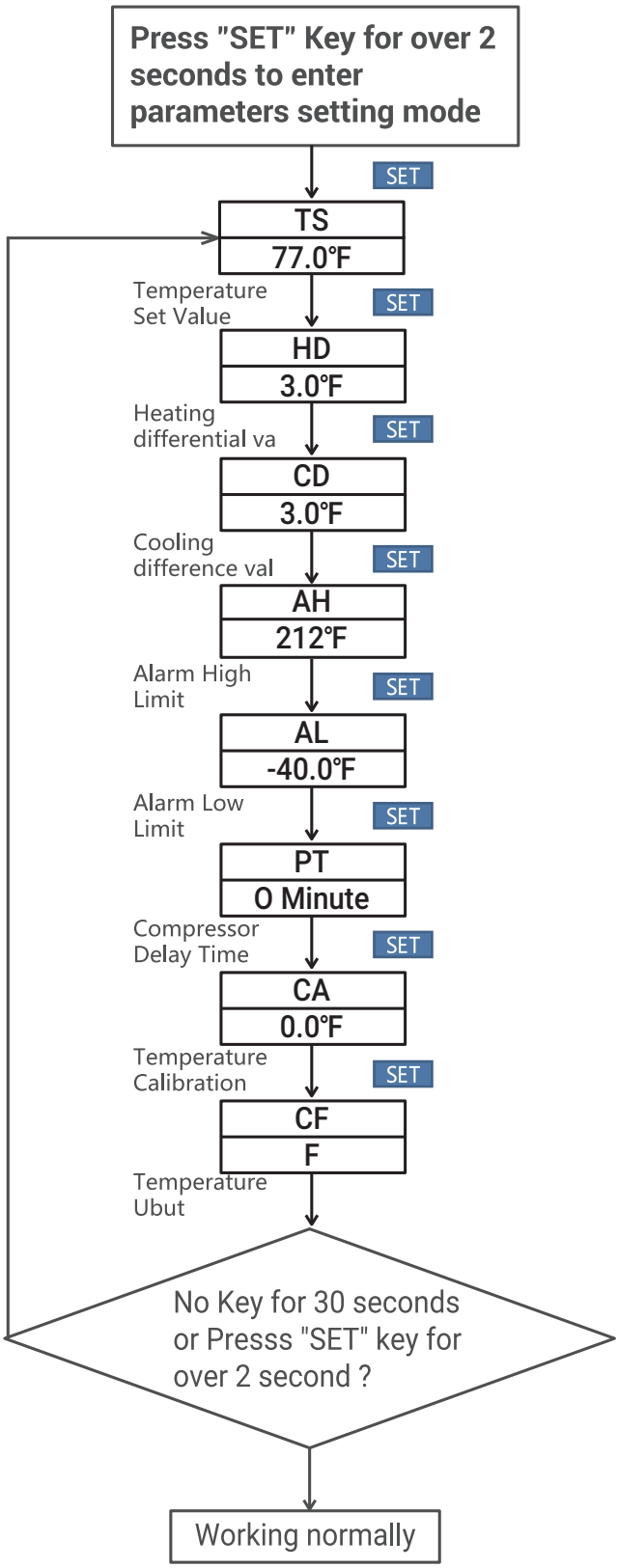
6.1.1.1 Quickly press "⌄", PV shows HD, SV shows heating difference value; Short Press "⌄" again, PV shows CD, cooling difference value. And It will be back to the normal display if there is no operation for 3 seconds or pressing the SET button.

6.1.1.2 Quickly press the SET button to enter the quick setting temperature setting value mode, at this time, SV displays the current control setting value and flashes. Quickly press "WIFI" or "⌄" button to increase or decrease the setting value. Long press "WIFI" or "⌄" button to quickly increase or decrease the setting value, then press SET button to confirm and exit. If there is no operation, it will automatically exit after 10 seconds and save the setting value.

6.1.2 Button Function in Setting Mode

When the controller is working normally, press the SET button for 2 seconds to enter the setting mode. The PV digital tube shows the first menu code“TS”, SV shows the corresponding setting value. Press SET button to scroll down the menu item and save the parameters of the previous menu item. Press "WIFI"or "∨"button to change the current setting value. **If in the setting state, there is no operation within 30 seconds or long press "SET" button for 2 seconds, it will exit and save the setting state and return to normal operation mode.**

6.2 Menu Setting Flow Chart



6.3 Setting Menu Instruction

Code	Symbol	Function	Setting Range	Default Settings	Annotation
TS	tS	Temperature Setting Value	-40.0°C~100°C -40.0°F~212°F	25.0°C 77.0°F	More details on 6.4.1
HD	Hd	Heating Difference Value	0.3°C~15.0°C 1.0°F~30.0°F	2.0°C 3.0°F	
CD	Cd	Cooling Difference Value	0.3°C~15.0°C 1.0°F~30.0°F	2.0°C 3.0°F	
AH	AH	Alarm High Temperature Limit	-40.0°C~100°C -40.0°F~212°F	100°C 212°F	More details on 6.4.2
AL	AL	Alarm High Temperature Limit	-40.0°C~100°C -40.0°F~212°F	-40.0°C -40.0°F	
PT	Pt	Compressor Delay Time	0~10 minutes	minute	More details on 6.4.3
CA	CA	Temperature Calibration	-9.9°C~9.9°C -15.0°F~15.0°F	0.0°C 0.0°F	More details on 6.4.4
CF	CF	Fahrenheit or Celsius Settings	C or F	F	More details on 6.4.5

6.4 Control Function Instruction

When the controller works normally, PV screen shows the measured temperature, meantime the SV screen shows the set temperature. It recognizes and converts from heating to cooling mode automatically. HEATING socket for heating output, the red LED indicator showing heating status. While COOLING socket for cooling output, the green LED indicator showing cooling status.

6.4.1 Instructions for Setting Temperature Control (TS, HD, CD)

6.4.1.1 Normal Temperature Control

When the measured temperature PV ≤ TS (Temperature Setting Value) – HD (Heating difference value),the controller will enter the heating state, the red led is on, HEATING output works. When the measured temperature PV ≥ TS(Temperature Settin Value), the red led is off and the HEATING output turns off. When the measured temperature PV ≥ TS(Temperature Setting Value) + CD(Cooling difference value), the controller will enter the cooling state, the green led is on, COOLING output works; the green led flashes, indicating that the cooling device is in the state of the Compressor delay protection. When PV(measured temperature) ≤ TS(temperature setting value), the green led is off and the COOING output turns off. For example, setting TS= 25.0°C, CD=2.0°C, HD=3.0°C, when the measured temperature value ≤ 22°C (TS-HD), the controller will enter the state; when the measured temperature value ≥ 25°C, the heating will stop; when the

measured temperature value 27.0°C(TS+CD), the controller enter the cooling state; when measured temperature value ≤25.0°C, cooling will stop.

6.4.1.2 Special Temperature Control

If there is no need to judge the return difference in heating or cooling when power on or exiting the setting state, then it directly compare with TS. For example: When power on or exiting the setting state, TS=25.0°C, CD=2.0°C, HD=3.0°C. If PV (measured temperature value) >25.0°C, it enters the cooling state. When PV(measured temperature value) ≤25.0°C, the cooling stops. Then return to normal temperature control. When PV(measured temperature value) <25.0 °C, it enter the heating state, when PV(measured temperature value) ≥ 25.0 °C, heating stops, and then return to normal temperature control.

6.4.2 Alarm High / Low Temperature Limit Settings (AH,AL)

When measured temperature ≥AH (high temperature limit alarm), then AH flashes alternately with the current temperature, meantime buzzer will“bi-bi-Biii”alarm, until the temperature <AH, buzzer off and return to normal display and control. Or press any button to turn the buzzer alarm off only . When measured temperature ≤ AL (low temperature alarm), then AL flashes alternately with the current temperature, meantime buzzer will “bi-bi-Biii”alarm, until the temperature >AL, buzzer off and return to normal display and control. Or press any button to turn the buzzer alarm off only. High and low temperature limit alarm will be pushed to mobile APP and remind the customer that the product is in alarm state.

6.4.3 Compressor Delay Time(PT)

In the cooling mode, when the power is turned on for the first time, PV(measured temperature value) ≥ TS(Tempera-

ture setting value) + CD(Cooling difference value), it will not start cooling immediately, but waiting for a delay time(PT). When two adjacent of cooling starting intervals are greater than the delay time, it will immediately start cooling; When two adjacent of cooling starting intervals are less than the delay time, it needs to operate the remaining delay time to start the cooling.
Delay time will start counting from the cooling output off.

6.4.4 Temperature Calibration(CA)

When the measured temperature deviates from the standard temperature, the temperature calibration function can be used to make the measured value of the instrument consistent with the standard value. The calibrated temperature = the measured temperature + the calibration value.

6.4.5 Fahrenheit or Celsius Settings (CF)

User can set the display unit to Fahrenheit

or Celsius according to their habits. The default temperature is Fahrenheit. If you need to display the unit in Celsius, then set the CF to C. Please note that when the CF changes state, all setting values are restored to the default setting and the buzzer gives a short beeping prompt.

07 Exception Handling

7.1 When the temperature sensor circuit is short-circuited or open-circuit fault, the controller starts the probe fault mode, it will close all execution states, the buzzer sounds and the digital tube displays ER, then press any button to eliminate the buzzer sound, after the fault is removed, it will return to the normal working mode.

7.2 When the controller is powered off or in the

state of disconnected, the mobile APP will still show online state, and the disconnected state will be showed after 1 to 3 minutes.

08 Technical Assistance and Warranty

8.1 Technical Assistance

If you have any problem installing or using this controller, please carefully and thoroughly review the instruction manual. If you require assistance, please write us to **support@inkbird.com**. We will reply your emails in 24 hours from Monday through Saturday. You can also visit our web site **www.inkbird.com** to find the answers of the common technical questions.

8.2 Warranty

INKBIRD TECH. C.L. warrant this controller for two years(temperature sensor for one year) from the date of purchase when operated under normal

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

FCC Requirement

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested

and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on

a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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INKBIRD APP

V8.0

修改内容：1. 去掉电话号码 2. 添加版本号

2021.12.01 修改内容：1. 更新地址 2. 更新版本号

2021.12.31 修改内容：1.更新版本号 2.110Vac改为120Vac
3.添加法国EPR

2022.02.15 修改内容：1.更新版本号 2.下载码更新
3.改大写INKBIRD 4.更新登录界面

2022.03.28 修改内容：1.更新版本号 2.更新封底信息
3.更新下载二维码 4.更新APP登录界面截图
2022.03.31 修改内容：1.更新版本号 2.第五个标题更改

2022.07.11 修改内容：1 Rd 缩写改为Road