INKBIRD

ITC-306A WIFI

Temperature
Controller for Aquarium

Contents

Part 1 Quick Guide to Use

01 CAUTION

- KEEP CHILDREN AWAY
- TO REDUCE THE RISK OF ELECTRIC 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

ATTENTION:

- ELOGIGANEZ LES ENFANTS
- Pour réduire le d'électrocution,Pour Usage L'Intérieur Seulement.
- Risque de choc électrique. Ne pas brancher dans une autresource de courant portative ou une rallonge.
- UTILISER UNIQUEMENT DANS DES EMPLACEMENTS SECS

02 Product Features

- Plug and play, easy to use
- Dual relay controlling, one for control output, another for abnormal protection
- Support Celsius and Fahrenheit reading
- Dual display window for simultaneous display of measured temperature and stop heating temperature
- Dual temperature probes to ensure the accuracy of the water temperature
- Temperature calibration
- High and low temperature alarm
- Probe abnormal alarm
- Continuous heating time alarm

03 Technical Parameters

- Model: ITC-306A
- Brand name: INKBIRD
- Input: 230V ac 50Hz 10A/2300W MAX
- Output: 230V ac 50Hz 10A/2300W (total two receptacles) MAX
- Disconnection means: Type 1B
- Pollution degree: 2
- Rated impulse voltage: 2500V
- Automatic action: 30000 cycles
- Type of temperature probe: R25℃=10KΩ±1% R0℃=26.74~27.83KΩ B25/85℃=3435K±1%
- Temperature control range: 0.0℃~45.0℃/32.0℉~113℉
- Temperature measurement range: -40.0℃~100℃/-40.0℉~212℉
- 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℃~40℃/-4.0℉~104℉
- Storage environment:
  Temperature: 0℃~60℃/32℉~140℉;
  Humidity: 20~80%RH (Umfrozen or condensation state)
- Warranty: Controller 2 years, probe 1 year

04 Technical Assistance and Warranty

4.1 Technical Assistance

If you have any problems installing or using this controller, please refer to the instruction manual for guidance. If you require further assistance, please email us at **support@inkbird.com**. We will reply within 24 hours, Monday to Saturday. Alternatively, you can visit our official website (www.inkbird.com) to find answers to common technical questions.

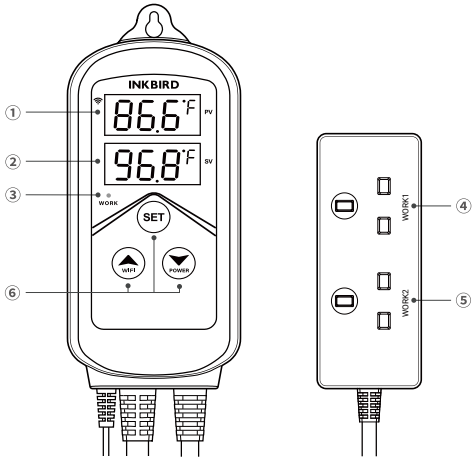
4.2 Warranty

INKBIRD TECH CO., LTD warrants this controller (one year for the temperature probe) against defects caused by INKBIRD's workmanship or materials for two years (one year for the temperature probe) from the date of purchase, provided it is operated under normal conditions by the original purchaser (not transferable). This warranty is limited to the repair or replacement (at INKBIRD's discretion) of all or part of the controller.

Part 2

ITC-306A WIFI
TEMPERATURE
Controller Manual

01 Control Panel



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

② SV: In the normal mode, it displays the temperature value when stopping heating; in the setting mode, it displays menu setting.

③ Red indicator: ON - heating output is turned on; OFF - heating output is off.

④/⑤ Output socket

⑥ Setting button (SET), Increase button (WIFI), Decrease button (POWER): Please refer to the button description for more details.

02 | INKBIRD APP Setting

2.1 Download the APP

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

Scan QR code to download

INKBIRD APP

2.2 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 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:

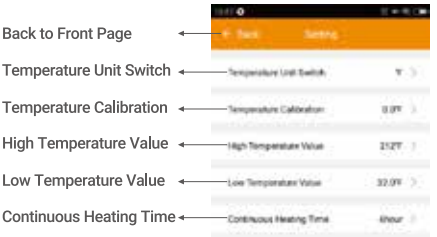
● Plug the device in the socket and make sure that the device is in the Smartconfig.
● Configuration state (the LED symbol is flashing, interval flashing 250ms). Click “Confirm indicator rapidly blink” and then select Wi-Fi network, enter Wi-Fi password, click “confirm” to enter connection process.
● 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 “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.



03 Controlling Function Description

3.1 Button Description

3.1.1 Restore to Factory Settings

Press and hold the decrease button POWER to power on, the buzzer will beep once, that all parameters will restore to the factory settings.

3.1.2 Power Button

In any case, press and hold POWER for 2 seconds to turn off, there will be no output. After power off, short press to turn on the power. In the power on state, short press to turn on or pause the socket power. In the paused state, PV displays the current temperature, SV displays "P", there will be no output.

3.1.3 Quickly Set the Control Temperature Mode

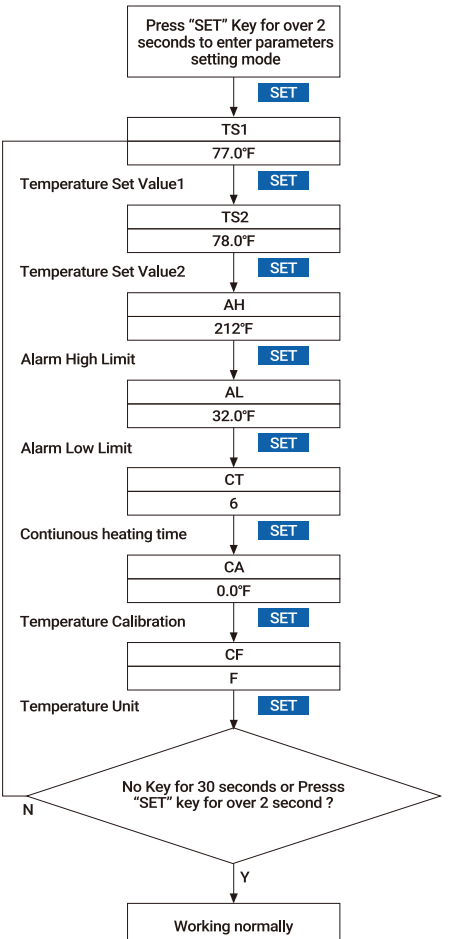
Tap "SET" button to enter the quick setting control temperature mode, SV displays the temperature setting value1 and flashes. At this time, press WIFI or POWER to increase or decrease the setting value. Long press and hold the WIFI or POWER button to increase or decrease the setting value quickly. Then press again SET button, SV displays the temperature setting value2 and flashing, At this time, press WIFI or POWER to increase or decrease the setting value. Long press and hold the WIFI or POWER button to increase or decrease the setting value quickly, press SET button again to confirm and exit. If there is no operation, it will automatically exit after 10 seconds and save the set value.

3.1.4 Button Function in Setting Mode

When the controller is working normally, press and hold the SET button for 2 seconds to enter the setting mode. PV displays the code"TS1", and SV displays the corresponding setting value. Press the SET button to scroll down the menu and save the parameters of the previous menu item, or press the WIFI or POWER button to change the current setting value. If there is no button operation within 30 seconds or long press the SET button for 2 seconds in

the setting state, it will exit and save the setting state, then return to the normal working mode.

3.2 Menu Setting Flow Chart



3.3 Changing Settings

Code	Symbol	Menu Function	Setting Range	Default Settings	Remarks
TS1	TS1	Temperature Setting 1	0.0℃~45.0℃	25.0℃	More details on 6.4
			32.0℉~113℉	77.0℉	
TS2	TS2	Temperature Setting 2	0.0℃~45.0℃	26.0℃	
			32.0℉~113℉	78.0℉	
AH	AH	High Temperature Alarm	-40.0℃~100℃	100℃	More details on 6.5
			-40.0℉~212℉	212℉	
AL	AL	Low Temperature Alarm	-40.0℃~100℃	0.0℃	
			-40.0℉~212℉	32.0℉	
CT	CT	Continuous Heating Time	0~96 Hour	6 Hours	More details on 6.6
CA	CA	Temperature Calibration	-9.9℃~9.9℃	0.0℃	More details on 6.7
			-15.0℉~15.0℉	0.0℉	
CF	CF	Fahrenheit or Celsius Setting	C or F	F	More details on 6.8

3.4 Control Function Description

When the controller is working normally, the controller will automatically select the smaller temperature value of the two settings TS1 and TS2 to start the heating, and will stop heating when the temperature reach the larger one (the minimum absolute value of TS1 and TS2 is 0.3 °C or 0.5°F), PV displays the current temperature measurement value, and the SV displays the temperature at which heating stops.

3.5 High/Low Temperature Alarm (AH, AL)

When measured temperature ≥the setting value of high temperature AH, it will alarm and turn off heating output. The screen will rotate to display"AH"and current temperature, buzzer will "bi-bi-Biii", until the temperature < AH, buzzer will be off and return to normal display and control. Or press any button to only turn the buzzer alarm off.

When measured temperature ≤ the setting value of low temperature AL, it will alarm. The screen will rotate to display"AL"and current temperature, buzzer will "bi-bi-Biii", until the temperature > AL, buzzer will be off and return to normal display and control. Or press any button to only turn the buzzer alarm off.

High and low temperature alarm will be pushed to mobile APP and remind the customer that the product is in alarm state.

3.6 Continuous Heating Time Alarm (CT)

When measured temperature ≤ the starting heating temperature, the output

control is turned on. If the continuous heating time arrives, but the measured temperature has not risen to the stop heating temperature, at this time the heater is abnormal or the probe is abnormal, and the output is forcibly turned off. PV will show E5, the buzzer keeps ringing, and the alarm status is pushed to the mobile APP to remind the customer that the product is in an alarm state and need to check in time.

When CT = 0, it means that the continuous heating alarm function has been cancelled.

3.7 Temperature Correction (CA)

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

3.8 Fahrenheit or Celsius Seting (CF)

Support setting Fahrenheit or Celsius. The default temperature unit is Fahrenheit. If you need to display the unit in Celsius, please set the CF to C and note that when the CF is changed , all setting values will be restored to the default setting and the buzzer will beep once.

04 | Abnormal Situation

4.1 Abnormal Temperature

The temperature difference between the two temperature probes is greater than or equal to 3℃/5℉

4.2 Probe Abnormal

Either the probe is not plugged in properly,or there is a short circuit inside or inside the probe.

Note:

When the product is abnormal, the PV will show as follows:
Er: Both probes have problems at the same time
E1 or E2: Temperature Probe Abnormal
E4: The temperature difference between the two temperature probes is greater than or equal to 3℃/5.0℉
E5: Continuous Heating Time Alarm

05 | APP Q&A

Status	Possible Reason	Preliminary Solution
Login failed	Password or account entry error	Double check the account and password
	Network server maintenance	Try again later
Connection failed	Improper steps (ignoring some important steps)	Confirm the correct steps and try again
	WiFi password input error	Plain-text input WiFi password
	Poor network	Try again or change the network environment later
	Phone model and system version	Please change to another mobile phone to try again
Fail to load data	Network server maintenance	Try again later
APP Blank Screen	App running in the background occupy too much memory	Clear App running in the background
	Incomplete installation	Uninstall Inkbird Pro App and re-install

06 | 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.

07 | IC Warning

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic
Development Canada's licence-exempt RSS(s).
Operation is subject to the following two conditions:
(1)This device may not cause interference.

(2)This device must accept any interference, including interference that may cause undesired operation of the device.
The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 andcompliance with RSS-102
RF exposure, users can obtain Canadian information on RF exposure and compliance.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your
body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes :
(1)L'appareil ne doit pas produire de brouillage;
(2)L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en comprom ettre le fonctionnement.
Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 etla conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne surl'exposition et la conformité de rf.
Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ouémetteur.
Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

08 Troubleshooting Guide

Issues	Causes	Solutions
Can not connect to WIFI.	1. Incorrect phone settings. 2. Incorrect router settings. 3. Incorrect connection mode selection. 4. Device malfunction.	1. In the phone settings, all permissions for the INKBIRD app are turned on. The Bluetooth and location functions of the phone are turned on. 2. Please ensure that the router can transmit 2.4GHz wifi signal alone, and the mobile phone remains connected to the 2.4GHz wifi that can access the Internet. Please make sure the SSID of the 2.4GHz wifi is not hidden. The password is not empty. There is no limit on the number of connected devices to the router. If you are not sure whether the upper limit has been reached, please turn off 2-3 WIFI devices. Router settings are as follows: ·Wireless protocol: 802.11 b/g/n, but cannot be set to 11n only; ·Security mode: WPA/WPA2 ·Authentication type: AES ·Enable DHCP service ·No VPN service. 3. Select the correct WiFi mode in the app. If there are many WiFi products interfering nearby, please switch the device to slow flash (AP) mode to connect. If it still does not work, please contact customer service.
The probe reading is incorrect.	1.The probe is placed in a area with poor temperature circulation. 2.The probe is damaged.	1. Adjust the position of the probe. 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 (calibration) function to calibrate.

Issues	Causes	Solutions
Heating output will not turn on.	1. Incorrect settings. 2. Incompatible heater. 3. Output malfunction.	1. Verify that the settings are correct. 2. The heater power is within the range of 100-240V, 10A. The heater can automatically turn on when plugged in. The heater does not have a built-in temperature control, or the built-in temperature control does not affect the ITC-306T-WIFI control. 3. There is no problem with 1&2， please: · Unplug the controller. · Press and hold the 'SET' button. · Plug the controller to power on, then release the 'SET' button · Quickly press the ' ▲ WIFI ' button (do not press the ' ▼ POWER ' button). The 'work' indicator and output should activate. If the heater still does not work, please contact customer service.
Heating output will not turn off.	1. Incorrect settings. 2. Heater power exceeds limit. 3. Output malfunction.	1. Verify that the settings are correct. 2. The heater power is within the range of 100-240V, 10A. 3. There is no problem with 1&2，please: ·Unplug the controller. ·Press and hold the 'SET' button. ·Plug the controller to power on, then release the 'SET' button · Quickly press the ' ▼ POWER ' button (do not press the ' ▲ WIFI ' button). If the heater still cannot not be turned off, please contact customer service.

Shenzhen Inkbird Technology Co., Ltd.
support@inkbird.com

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V1.0
MADE IN CHINA
DESIGNED BY INKBIRD