



C929-A Smart Wi-Fi Controller for Aquarium Manual



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1. Caution

- KEEP CHILDREN AWAY
- TO REDUCE THE RISK OF ELECTRIC SHOCK, USE ONLY INSIDE DOORS
- RISK OF ELECTRIC SHOCK. DO NOT PLUG INTO ANOTHER RELOCATABLE POWER TAPS OR AN EXTENSION CORD.
- USE ONLY IN DRY LOCATION

2. Features

- Plug-n-Play, easy to use
- Dual relay controlling, one for control output, another for abnormal protection
- Support Celsius and Fahrenheit reading
- LCD Display, more intuitive
- 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

3. Technical Parameters

- Power parameter:
Voltage: 120Vac 60Hz
Current: 10A
Maximum Wattage: 1200W
- Type of temperature probe: $R_{25^{\circ}\text{C}}=10\text{K}\Omega\pm1\%$
 $R_{0^{\circ}\text{C}}=26.74\sim27.83\text{K}\Omega$ $B_{25/85^{\circ}\text{C}}=3435\text{K}\pm1\%$

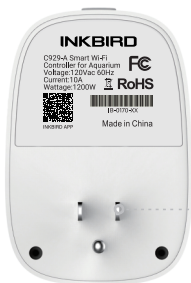
- Temperature control range: 0.0°C~45.0°C/32.0°F~113°F
- Temperature measurement range: -40°C~100°C/-40°F~212°F
- Temperature display accuracy: 0.1°C/°F(<100°C/°F), 1°C/°F(≥100°C/°F)
- Temperature measurement accuracy:

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

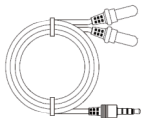
- Display unit: Celsius °C or Fahrenheit °F
- Ambient temperature: -20°C~40°C/-4°F~104°F
- Storage environment: temperature: 0°C~60°C/32°F~140°F; Humidity: 20~80%RH (Unfrozen or condensation state)
- Warranty: Controller 2 years, probe 1 year

4. Get to Know the Device





Power Plug



Temperature Probe

4.1 Indicator light

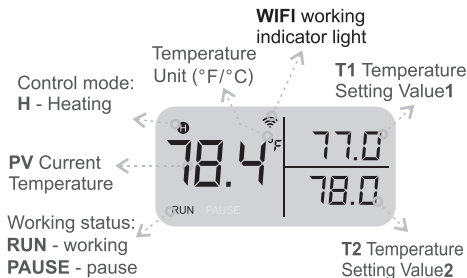
Red Light On: Heating output is on.



No Light: No power output.



4.2 Control Panel Instruction



PV: It shows the measured temperature when the temperature probe is inserted.

T1: In normal mode, it will display the temperature setting value1. In setting mode, it will display the menu code.

T2: In normal mode, it will display the temperature setting value2. In setting mode, it will display the setting value.

RUN: In running mode, the“RUN”symbol will be displayed.

PAUSE: In pause mode, the“PAUSE”symbol will be displayed.

5. Inkbird Smart APP Setting

5.1 Download the APP

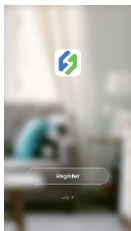
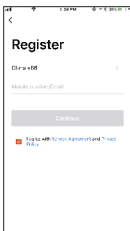
Search the keyword “InkbirdSmart” in Appstore or Google Play, or scan the following QR code to download and install the APP.



InkbirdSmart

5.2 Pair with your phone

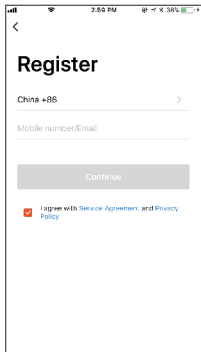
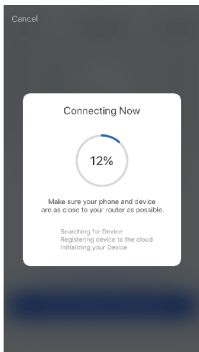
- ① Open the app, it will ask you to register or log in your account on the APP. Select the country and enter your Mobile number or Email to finish the registration. Then press “Add Home ”button to create your home.



- 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  2 seconds to reset the WIFI. It will enter the Smartconfig configuration state by default. You can quickly press  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.

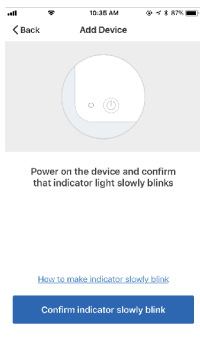
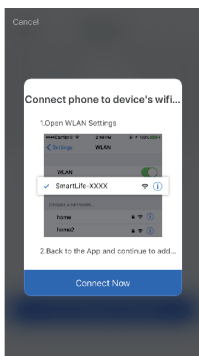
Add device in quick connection:

- 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.

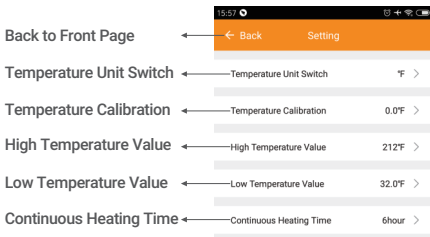


Add device in AP mode:

- 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 successfully and enter into device controlling interface.
- ⑤ In the temperature control mode, user is able to set control function via APP.



6. Controlling Function Description

6.1 Button Instructions

6.1.1 Power button

In any case, it will be turned off when long pressing for 2 seconds and no output no display. After power off, quickly press to restore the power-on state. In the power-on state, quickly press the button, it will turn on or suspend outlet power.

6.1.2 Set controlling temperature

In normal working mode, quickly press  to enter the settings of temperature controlling state, at this time T1 setting temperature flashes, press  or  button to increase or decrease the setting temperature value, quickly press  to confirm T1 setting value and enter T2 setting, T2 setting temperature flashes, press  or  to increase or decrease the setting temperature value, quickly press  to confirm saving and exit the setting of temperature controlling state. And if there is no action for 10 seconds, it will automatically exit and save the data.

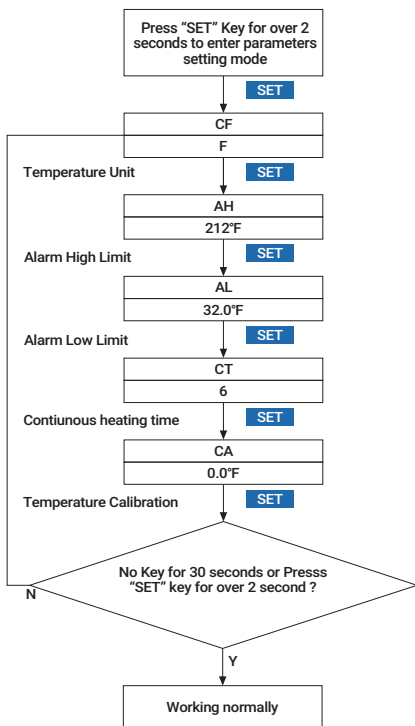
The default value of T1 is 77.0°F or 25.0°C, the default value of T2 is 78.0°F or 26.0°C, and the temperature range of T1 and T2 is 0.0°C~45.0°C or 32.0°F~113°F.

6.1.3 Menu Parameter Setting

In the normal working mode, press the button  for 2 seconds to enter the menu parameter setting state. At this time, T1 displays the menu code, T2 displays the menu setting value, presses  to scroll down the menu option and saves the previous menu parameter, then presses  or  button to change the current setting value. In

the setting state, long press  for 2 seconds or without operation in 30 seconds, it will exit the setting state and save the parameters, then return to the working mode.

6.2 Setup Menu Flow Chart



6.3 Setting Menu Instruction

Code	Symbol	Menu Function	Setting range	Default	Remarks
CF	<i>CF</i>	Fahrenheit or Celsius setting	C or F	F	More details on 6.8
AH	<i>AH</i>	High Temperature Alarm	-40.0~100°C /-40.0~212°F	100°C /212°F	More details on 6.5
AL	<i>AL</i>	Low Temperature Alarm	-40.0~100°C /-40.0~212°F	0.0°C /32.0°F	
CT	<i>CT</i>	Continuous Heating Time	0 ~ 96 hours	6 hours	More details on 6.6
CA	<i>CA</i>	Temperature Calibration	-9.9~9.9°C /-15.0~15.0°F	0.0°C/°F	More details on 6.7

6.4 Control Function Description(TS1/TS2)

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)

6.5 High/Low Temperature Alarm(AH,AL)

When measured temperature $\geq$ 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 $\leq$ 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.

6.6 Continuous Heating Time Alarm(CT)

When measured temperature $\leq$ 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.

6.7 Temperature Calibration(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.

6.8 Fahrenheit or Celsius Setting(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.

7. Abnormal Situation

7.1 Temperature Abnormal

The temperature difference between the two temperature probes is greater than or equal to 3°C/5°F.

7.2 Probe Abnormal

Any probe is not inserted properly, or there is an open and short circuit in the probe or the wire.

7.3 Heater Abnormal: The heater is heating but the water temperature is decreasing.

Note: When the product is abnormal, the PV display will show as follows:

Er&E1&E2: Temperature Probe Abnormal

E4: The temperature difference between the two temperature probes is greater than or equal to 3°C/5.0°F

E5: Continuous Heating Time Alarm

8. 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

Connection failed	WiFi password input error	Plain-text input WiFi password
	Poor network	Try again or change the network later
	Problem of Phone model and system version	Please switch to another mobile phone to try
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 InkbirdSmart App and re-install

9. Technical Assistance and Warranty

9.1 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@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.

9.2 Warranty

INKBIRD TECH. C.L. warrants this controller for two years (temperature probe 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 workmanship 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.



Inkbird Tech.C.L

 support@ink-bird.com

 www.ink-bird.com

 Shenzhen, GD, 518000, China

