

INKBIRD®

P108 PID Temperature Controller User Manual



1. Get to know the device



Probe Sensor

Probe with cable x 1

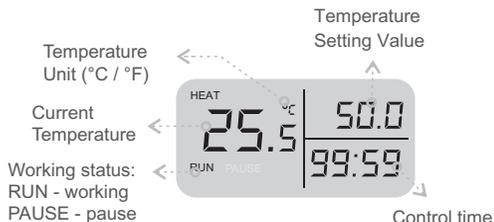
1.1 Indicator Light

Red Light On: Heating output is on.

No Light: No power output.



1.2 Functions on the screen

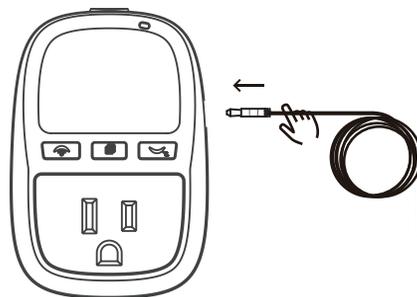


1.3 Specification

- Input: 100~265VAC 50/60HZ
- Maximum Current: 13.5A
- Maximum Power: 1500W (110V)
- Temperature Control Range: 25~100°C / 77~212°F
- Temperature Resolution: 0.1°C / 0.1°F
- Temperature Accuracy: $\pm 0.3^{\circ}\text{C}$ / $\pm 0.5^{\circ}\text{F}$
- Ambient Temperature: 0~100 °C (32°F~212°F)
- Dimension: 93(L)*63(W)*34(H) mm
(3.66(L)*2.48(W)*1.34(H) in)

Warning: Operating current over maximum current may cause electrical wire short-circuited or even a fire in a severe case.

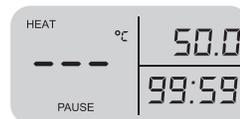
2. Install the probe



Please insert the probe into the probe interface.

Please note:

- 1 If there is no probe inserted, the current temperature will display "--" and the working status will change to "PAUSE" and there will be no output control.



- 2 This device doesn't support other probes, except the probe in the standard package and the designated probes by Inkbird.
- 3 The front part of the probe is the temperature sensor, please put it into the detection place.

3. How to set

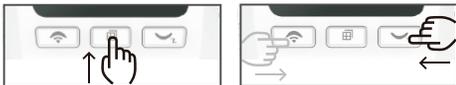
3.1 Power Button Function

- 1 When the controller is working, long press "POWER" button for 3 seconds can turn it off; short press POWER button can get it restored.
- 2 When the controller is working, short press "POWER" button can switch the working status to RUN or PAUSE.



3.2 Temperature value setting

Step 1. Short press "SET" button once to enter the temperature setting mode when the "SV" value starts flashing, press "UP" or "DOWN" button can change the current "SV" value when still flashing.



3.3 Control time setting

Step 1. Short press "SET" button once to enter the control time setting mode when the "HOUR" value starts flashing, press "UP" or "DOWN" button can change the current "HOUR" value when still flashing.



Step 2. Short press the "SET" button once again to enter the "MINUTE" setting mode when the "MINUTE" value starts flashing, press "UP" or "DOWN" button can change the current "MINUTE" value when still flashing.

Step 3. Short press the "SET" button once again to save and quit.



Please note:

After the controller enter into "RUN" status, and the current temperature rises to SV-0.3 °C/°F, the controller starts timing with the countdown display, after the timing, the controller will enter to "PAUSE" status with a warning sound.

If there is no operation carried out for 30 seconds when entering the current time setting mode, the device will automatically quit without saving any parameters modified.

3.4 Menu parameters setting

Step 1. Long press the “SET” button for 3 seconds to enter the parameters setting mode when the parameter starts flashing, press “UP” or “DOWN” button can change the current parameter when still flashing.

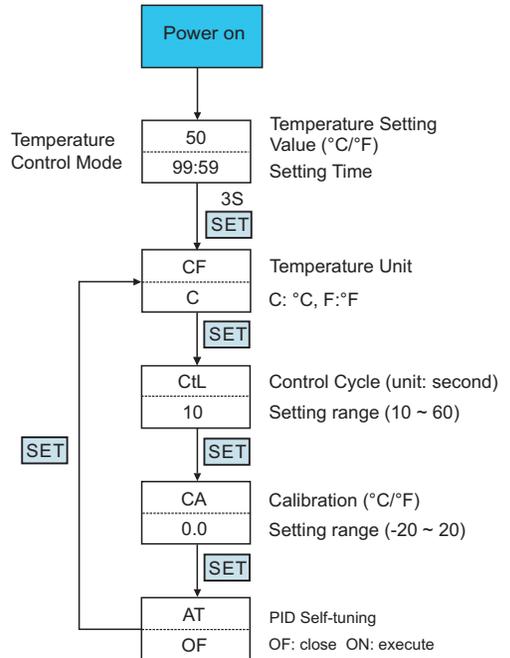


Step 2. Short press the “SET” button once to enter the next parameters setting mode, long press “SET” button to save and quit.



If there is no operation carried out for 30 seconds, the device will automatically quit without saving any parameters modified.

3.5 Setup Flow Chart



Please note:

Please view the following specific menu code interpretation in the section 3.5.

3.6 Menu Instruction

Menu code	Function	Setting range	Unit	Default	Note
CF	Fahrenheit or Centigrade	C/F		C	3.6.1
CTL	Control Cycle	10~60	S	10	3.6.2
CA	Temperature Calibration	-20~20	°C/ °F	0	3.6.3
AT	PID Self-tuning	OFF/ON		OF	3.6.4

3.6.1 Display in Fahrenheit or Centigrade unit (CF)

Users can select display with Fahrenheit or Centigrade temperature value according to their own habit, the default value is C.

3.6.2 Cycle Time Setting (CTL)

Short control cycle setting can improve the temperature control precision, but short control cycle can shorten the life of relay mechanical switch.

Long control cycle can affect the accuracy of the temperature control, if high accuracy is not required, control cycle can be set longer.

3.6.3 Temperature Calibration (CA)

When there is deviation between measured temperature and actual temperature, use temperature calibration function to align the measured temperature and actual temperature. The corrected temperature is equal to temperature before calibration plus corrected value (corrected value could be positive value, 0 or negative value).

3.6.4 PID Self-tuning (AT)

Generally the default PID parameter can precisely control the conventional heaters, we suggest user use it according to the first setting. If the temperature is not good, then AT option can set from "ON" to "OF" (re-execute PID self-tuning), during PID self-tuning, the temperature setting area will be alternately flashes setting value and "AT", and will recover to normal display mode after the self-tuning, if changing the heater or the temperature is not good, please repeat this operation to PID self-tuning.

Please note:

If there is no operation carried out for 30 seconds, the device will automatically quit without saving any parameters modified.



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