

Instruction Manual for Precision Incubators of Constant Temperature and Humidity

- ☆ Thank you for purchasing our products.
- ☆ Please read this Instruction Manual carefully before use.
- ☆ Please properly keep this Instruction Manual for easy reference.

Shanghai Yinxi Instrument Co., Ltd
Professional Manufacturer of Temperature and Humidity Controller



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I. Summary

1. Product Features

—Large color display screen:

The liquid crystal screen displays humidity and temperature. The dynamic icons visually indicate the running condition of the incubator.

—High precision:

The temperature is accurately controlled by microcomputer, which ensures a highly precise constant temperature and humidity. The touch-button facilitates the temperature regulation.

—Safe and reliable:

Over-voltage protection, under-voltage protection, and double temperature limits (Alarms are given in case of a superhigh temperature (over 69.9℃) or an ultralow temperature (under 0℃). The upper-limit protection can be provided when the temperature reaches 70℃.)

—Environment-friendly and energy-saving:

The insulating layer is integrally injected with hard PU, thus ensuring a long durability and a high effectiveness in energy saving.

—Self-diagnosis:

The fault can be diagnosed automatically, and displayed visually. The supply voltage can be detected automatically, and alarms can be given.

— Automatic printing and recording

The data printer or curve recorder prints or records the historical data or curve of temperature automatically for easy reference and filing.

(The configuration is optional. Please mark it when placing an order.)

—RS485 computer communication interfaces

(The configuration is optional. Please mark it when placing an order.)

2. Application Scope and Main Purposes

The Precision Incubator of Constant Temperature and Humidity (referred to as the incubator, the same

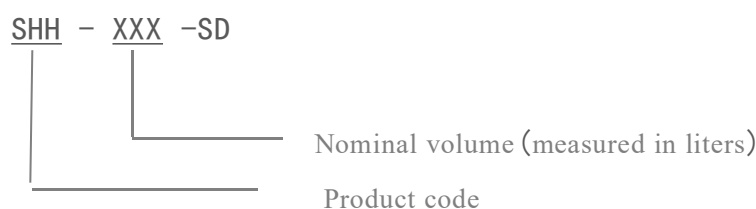


below) is a kind of high-precision device for laboratory providing constant temperature and humidity, thus making itself ideal for colleges and universities, scientific research institutions, medical field, animal husbandry, chemical, food, agriculture, aquaculture, biogenetic engineering and so on. It can find wide application in testing effectiveness and the aging of the medical field, chemical material, wood and building materials, as well as in the research on the culture of tissues, cells, mould and microorganism and on other tests in the condition of constant temperature and humidity.

3. Type and Specification

The incubator has a variety of specifications.

4. Composition and Meaning of Model



5. Service Environment

The incubator should be used under the following conditions:

- ① Ambient temperature: $5 \sim 30^{\circ}\text{C}$;
- ② Ambient humidity: $\leq 80\% \text{RH}$;
- ③ Range of atmospheric pressure: $86\text{kPa} \sim 106\text{kPa}$.

6. Operating Conditions

- ① It should be operated on an AC $(220 \pm 22) \text{ V}$ $(50 \pm 1) \text{ Hz}$ power source.
- ② Operating mode: Continuous operation.

II. Structural Features

—body:

The exterior housings are made of superior cold-roll steel sheets, and the inner housing is made of brushed stainless steel. The insulating layer is made of hard PU foam.



—**Door:**

The door is mounted with hollow glass in its middle so as to facilitate observing the experiment effect. The insulating layer is made of hard PU foam. The door gasket is sealed together with the housing with magnetic adhesive.

—**Refrigerating system:**

It is made up by the compressor, condenser, capillary tube, evaporator and so on.

—**Control system:**

It is controlled by microcomputer.

— **Supporting net:**

The round steel is made into the strip shelf which is then sprayed with plastics. The height is adjustable.

III. Technical Features

The incubator is a kind of thermostatic and constant-humidity device that can achieve humidifying, heating and refrigerating. It is designed for the required purposes (No.2 in the summary).

The main technical parameters are shown as follows(chart 1 and 2):

Table 1: Dimension of incubator Body

Product Model	Boundary Dimension	Dimension of Inner Body
SHH-250SD	570mm×570mm×1600mm	500mm×480mm×1050mm



Table 2: Major Performance Parameters

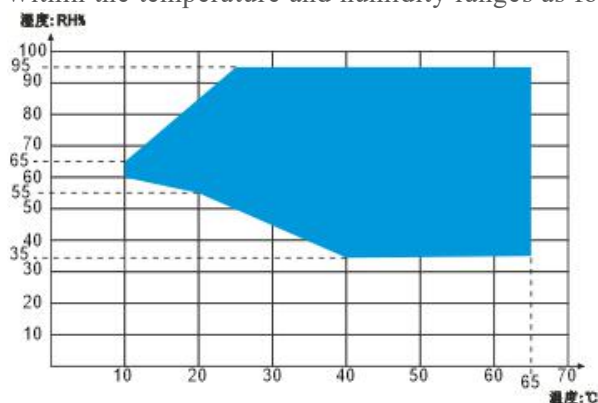
Model Item	SHH-250SD
Nominal volume	250L
Temperature control range	5°C ~ 65°C(Note1)
Allowance of temperature fluctuation	±0.5°C
Allowance of temperature uniformity	1.2°C
Humidity control range (Note 2)	35%RH ~ 95%RH
Humidity fluctuation	±5%RH
Lighting power	6VA
Compressor power	145VA
Heating power	300VA
Humidifying power	340VA
Refrigerant	R134a

Note: The above parameters are measured in the 30°C±2°C thermostatic incubator.

Note 1: In case a low temperature is used, the following principle shall be followed: operating temperature≥ambient temperature-20°C.

Note 2: Within the temperature and humidity ranges as follows, it is fully controlled, (shown in Figure

1).

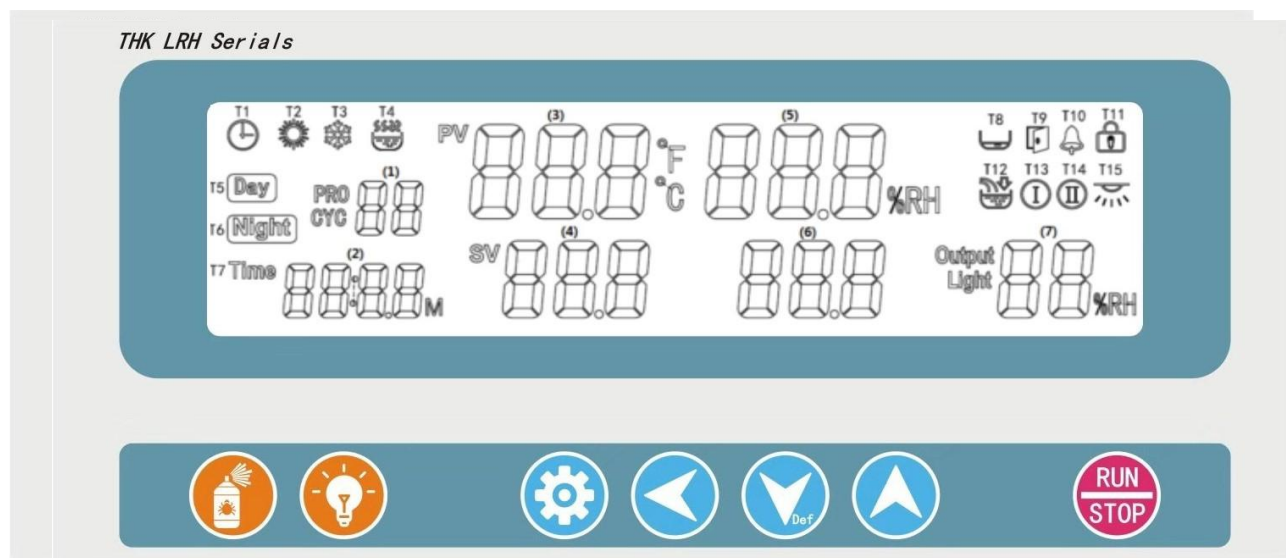


The humidity controlling area (Figure 1)



IV. Directions for Use and Precautions

1. The indication panel of the incubator :



2. Key and identifier description:

2.1 The definition of Identifier

T1Reservation: when entering the reservation timing state, T1 will flash and 【(2) the display window】 will display the appointment countdown;

T2 Heating: when heating has output, T2 lights up;

T3Compressor: when the compressor starts, T3 lights up; when the compressor is waiting for start-up , T3 flashes;

T4 Humidification: when humidifying has output, T4 lights up;

T5 Daytime: when entering day mode, T5 lights up

T7 Timing: when entering the operation timing state, T7 will flash, and 【(2) display window】 will display the timed countdown;

T8 Water shortage: when there is a signal of water shortage, T8 lights up; when there is an alarm of water shortage, T8 flashes;

T9 Open door: when the door is opened, T9 lights up;

T10 Alarm: when there are alarms of temperature and humidity , T10 lights up; when entering the low temperature or high temperature protection state, T10 flashes;

T11 Lock the screen: when the screen is locked, T11 lights up;

T12 Adding water: when the pump has output, T12 lights up;

T13 Defrosting: when defrosting has output, T13 lights up;

T14 Solenoid valve: when the solenoid valve has output, T14 lights up

2.2 Display window

【(1) Display window】 shows: values of period or segment ; 【(2) Display window】 shows:

The values of timing or time setting;

【(3) Display window】shows: the measured temperature; 【(4) Display window】shows: the setting temperature;

【(5) Display window】shows: the measured humidity; 【(6) Display window】shows: the setting temperature;

【(7) Display window】shows: the setting illumination or the output power of heating .

2.3 Definition of Keys

	key:	In normal display state, click this key to switch on and off the disinfection and sterilization function.
	Key:	In normal display state, click this key to switch on and off lights.
	Key:	In normal display state, click this key to enter the modification interface of the setting values , and long press this key for 3 seconds to enter the modification interface of the parameter table.
	Key:	In the setting state, click this key to make the setting values shift, flash and modify. In normal display state, if it runs in 【day / night】 mode, it can switch between day and night running state; if it runs in program mode, it can switch to display the number of segments or the cycle.
	Key:	In the setting state, click this key to increase the setting values.
	Key:	In the setting state, click this key to decrease the setting values. In normal display state, long press this key to turn on the defrosting function manually.
	Key:	In normal display state, click or long press this key to start or stop the operation of the controller.

3. Instructions of operation:

1. When the controller is powered on, 【(3) Display window】shows “TH”, 【(5) Display window】shows “V01” , the buzzer gives a short beep. After about 2 seconds, it will enter the normal display state.

2. The modification of setting values

In normal display state, click 【setting】key, the two identifiers, “TIME” and “SV” flash at the same time. At this time, the value of the number flashed by the cursor can be modified by 【shift】 , 【increase】 , 【decrease】 keys, and click 【setting】 key again to switch to the next group of values. After modification, long press the 【setting】 key for 1 second to exit the setting state, or in the fixed mode, continuously click the 【setting】 key and modify a group of data and exit. The buzzer will give a short beep to enter the normal display interface, and the parameters will be saved automatically.

When the controller is running in the program mode, click the 【setting】 key, and the value of segments starts to flash. At this time, you can view the setting values of time, temperature, humidity and illuminance under the corresponding number of segments by modifying the value of segments with the 【increase】 , 【decrease】 keys. And then click the 【setting】 key again to



modify the setting parameters one by one in the present segment. When the cursor returns to the value of segments and flashes, modify the value of segments again to modify the next segment.

When the controller is running in the **【DAY /NIGHT】** mode, click the **【setting】** key, and the "DAY" identifier will flash. Through the **【increase】** , **【decrease】** keys, it can be switched, and the "NIGHT" identifier flashes, to view the setting parameters under the day and night. Click the **【setting】** key to modify the setting parameters in the day or night mode.

3. To set the number of segments or cycle

In the non-fixed value mode (see **parameter table-1-u1 for details**), when the controller stops running, long press the **【setting】** key for 3 seconds, the **【(1) display window】** displays the "LC" prompt, and the **【(2) display window】** displays the password. Modify the password to 3 through the **【increase】** , **【decrease】** keys to enter the cycle and segment number settings.

In the program mode, if the "PRO" prompt flashes, you can set the total operation sections; when you click the **【setting】** key, and the "CYC" prompt flashes, you can set the total operation cycles (when the number of cycles is set to 0, the controller always runs). After setting, long press the **【setting】** key for 3 seconds to exit the setting and the parameters will be saved automatically. In the day and night mode, there is no total operation sections, only the cycle can be set.

4. Start and stop

Long press the **【R / S】** key U7 (see **user parameter TABLE-1 for details**) seconds to start the the controller, and the remaining running time will be displayed in **【(2) display window】** . When the operation time is over, the controller will stop working, and the buzzer will beep u9 (see **user parameter TABLE-1 for details**) seconds. **【(2) display window】** will display "End", or long press **【R / S】** key U7 seconds to stop the controller working and **【(2) display window】** will display "oFF".

When the controller is running in program mode and the total number of segments is greater than 1, if the constant temperature and humidity condition (see **parameter table-1-u5, U6 for details**) is not on, it is necessary to set each segment of time before starting the controller. When the time is all set to 0, the start will fail.

5. Reservation function

When the value of the reservation function AP (see **the user parameter table-7**) is set to 1, click the **【setting】** key again to set the reservation time, and the unit is minutes. Otherwise, it will directly exit the normal display interface.

After the reservation time setting, it is needed to click the **【R / S】** key to start the machine. In the reservation timing, you can enter the parameter table again to modify the reservation time, or click the **【R / S】** key to stop the controller, and the setting time of running the machine is automatically cleared, which is only valid once.

6. The memory function for power-down

By modifying the parameter of power down memory (see "U2" parameter: internal parameter TABLE-1), you can select whether there is memory function for power-down.

4. Functions of Intrinsic Parameters



Press  to enter into the parameter setup menu after the instrument is powered on.

Internal Operation Parameters of the Control Panel

Press 	key : LC=000		
Prompt	Name	Setting Range	Instruction
LCK=9 the parameter table of users			
U1	Operation mode	(0~2) 0	0: Fixed value operation mode; 1: Day and night mode, 0 ~ 99 cycles; 2: Program mode, which is programmable 1 ~ 30 segments, 0 ~ 99 cycles.
U2	Operation mode of power-down	(0~2) 0	0: No operation; 1: Operate from the first segment (daytime); 2: Operate from power-down time.
U3	Timing correction	(-999~999) 0	Correct the total timing error, The correction value = 【operating time (seconds) - actual time (seconds)】 * 10 ÷ actual time (minutes).
U4	Time unit	(1~2) 1	1: minute 0~9999; 2: hour 0~9999.
U5	Timing deviation in the condition of constant temperature	(0~10.0℃) 0	If the deviation between the measured temperature and the setting value is less than U5, start the timing. Note: 0 means that there is no need to judge the temperature when timing.
U6	Timing deviation in the condition of constant humidity	(0~50.0%) 0	If the deviation between the measured humidity and the setting value is less than U6, start timing. Note: 0 means that there is no need to judge the humidity when timing.
U7	 Key Effective time	(0~10s)0	After long press U7(the time),  function key is valid
UA	illumination time	(0~9999min) 5	After the lighting is turned on, the illumination time is automatically turned off. Note: 0 means that the lighting must be turned off manually.
Ub	sterilization time	(0~9999min) 30	After the sterilization is turned on, the sterilization time is automatically turned off. Note: 0 means that sterilization must be turned off manually.
Uc	Address	(1~16) 1	Address of the machine.
LCK=103 parameter table of temperature			
TH	the upper deviation is over temperature and an alarm appears;	(0~20.0℃) 4.0	If "the measured value > the setting value + TH ", the upper deviation alarms and the temperature and humidity output will be turned off. The relay has output when there is a temperature alarm; the buzzer beeps; the alarm indicator is on, and the temperature unit flashes rapidly. Click any key to cancel the buzzer.
TL	the lower deviation is over temperature and	(-50.0~0℃) 0	If "the measured value < the setting value + TL ", the lower deviation alarms. The relay has output when there is a temperature alarm; the



	an alarm appears ;		buzzer beeps, and the temperature unit flashes slowly. Click any key to cancel the buzzer. Note: when "TL = 0", this function is invalid.
Tb	Deviation correction	(-99.9~99.9℃) 0	Correct measurement errors of the sensor in low temperature; Tb = the actual temperature - the measured value.
TA	Slope correction	(-999~999) 0	Correct measurement errors of the sensor in high temperature; TA = 1000 * (the actual temperature - the measured value) / the measured value.
TP	Heating ratio	(0.1~50.0) 8.0	Adjust the function of the proportion of time
TI	Heating integral	(1~2000s) 500	Adjust the function of the integral
TD	Heating differential	(0~2000s) 200	Adjust the function of the differential
TT	Heating cycle	(1~60s) 5	The cycle of controlling Heating
Tc	Heating off	(-5.0~5.0℃)0	Restrict the heating overshoot; when "the measured temperature $\geq$ the setting temperature+ Tc ", heating stops output.
To	heating power	(0~100%) 100	The percentage of the maximum power of the heating output.
Tu	Turn on refrigeration	(-10.0~10.0℃) 0.6	When the compressor is in manual start-stop mode and the compressor is under disconnected controlling mode, if "the measured temperature $\geq$ the setting temperature + Tu ", start the compressor.
Tn	Turn off cooling	(-10.0~uP) 0.6	When the compressor is in manual start-stop mode and the compressor is under disconnected controlling mode, if "the measured temperature $\leq$ the setting temperature + Tu - Tn ", shut down the compressor .
TE	High-temperature control, heating off	0	Under controlling of high temperature, the temperature point where heating stops is effective only when the setting temperature is higher than the ambient temperature.
LCK=203 parameter table of humidity			
HH	The upper deviation is over humidity and an alarm appears	(0~50.0%) 20.0	If "the measured humidity > the setting value + HH ", the upper deviation alarms; the humidity alarm relay is disconnected and the humidity output is turned off. The humidity alarm relay has output when there is an alarm; the alarm indicator is on, and the humidity unit flashes rapidly.
HL	The lower deviation is over humidity and an alarm appears	(-50.0~0%) 0	If "the measured humidity < the setting value+ HL ", the lower deviation alarms The humidity alarm relay has output when there is an alarm; the alarm indicator is on, and the humidity unit flashes rapidly. Note: this function is invalid when "HL = 0"
Hb	Deviation correction	(-99.9~99.9%) 0	Correct measurement errors of the sensor in low humidity; Hb = the actual humidity - the measured value.
HA	Slope correction	(-999~999) 0	Correct measurement errors of the sensor in high humidity; HA = 1000 * (the actual humidity - the measured value) / the measured value



HP	Humidifying ratio	(0.0~90.0) 10.0	Adjust the function of the proportion of time
HI	Humidifying integral	(1~999s) 200	Adjust the function of the integral
Hd	Humidifying differential	(0~999s) 30	Adjust the function of the differential
HT	Humidifying cycle	(0~60s) 5	The cycle of controlling Humidifying
Hc	Low-temperature control, Humidifying off	(-50.0~50.0%) 0.0	Under controlling of low humidity, the humidity point where humidifying stops.
Ho	Humidification power	(0~100%) 100	The percentage of the maximum power of the humidifying output.
Hu	Turn on dehumidification	(Hn ~20.0%)3.0	When the compressor is in manual start-stop mode and the compressor is under disconnected controlling mode, if "the measured humidity $\geq$ the setting humidity + Hu ", start the compressor.
Hn	Turn off dehumidification	(-20.0~ Hu)3.0	When the compressor is in manual start-stop mode and the compressor is under disconnected controlling mode, if "the measured humidity $\leq$ the setting humidity + Hn ", stop the compressor.
HE	The point where there is no humidification	(0.0~10.0)2.0	When the compressor is working in intermittent mode, if the setting value meets the conditions, the value can be modified and stop the humidification in advance.
HF	The point where there is no humidification in low humidity	(-10.0~10.0%) -5.0	When controlling low humidity, if "the measured humidity $\geq$ the setting humidity + HF ", the controller will prohibit humidification.

5. Instructions for humidifier

Connect the water inlet hole of the humidifier and the water tank with the hose of the machine, and add water to the water tank of the humidifier at the same time.

6. Precautions for Use:

1. This indicator has pre-set the following functions and protective measures:

①When the unit is energized for the first time or after the power failure, the compressor can enter into the operating state 1 to 3 minutes later.

②During the time: from starting the indicator or resetting the temperature to the temperature of the indicator firstly reaches the setting temperature:

- a) No dehumidification when heating.
- b) No humidification when refrigerating.



③ When the temperature in the indicator is 4°C over or under the setting value, the buzzer will beep. The power of the internal heating tube will cut off when the temperature is over 70°C.

2. In case of the circuit protection act caused by a too long door-opening time, the main power can be cut off.

3. When turning high humidity to low humidity or using the low humidity function from low-temperature area to high-temperature area, please check whether there is any water in the incubator. If there is some, clear it out before use.

4. There shall not be too much culture in the incubator, otherwise the air circulation inside will be affected.

5. Do not impact the unit, or pull the probe in the unit, so as to avoid that it goes out of control.

V. Fault Analysis and Removal

The simple faults and removal methods are shown in Chart 4:

Fault Symptom	Analysis of Causes	Troubleshooting	Remarks
The power light isn't working.	1. There is no power supply in the socket. 2. The fuse protector blows out.	1. Check the socket 2. Replace the fuse protector	Behind the box
The unit does not heat (or temperature does not rise.).	1. The heating light is off, indicating the control board failure. 2. The heating light is on, indicating the blowing out of heating tube.	1. Replace the control board. 2. Replace the heating tube.	
The unit can not refrigerate (or cool).	1. The refrigeration light is off, indicating the control board failure. 2. The refrigeration light is on, indicating the failure in the refrigerating system. 3. The time delay for compressor startup or re-operation is less than three minutes. Please wait	1. Replace the control board 2. Repair the refrigerating system 3. Please wait for a moment.	
The heating or refrigeration light is on, but there is no sign of temperature rise or drop.	Control board failure	Replace the control board	Located in the instrument
The temperature display stays at "----" always	There is a short circuit in the temperature probe or an open circuit in the leading wire.	Replace the probe Pt100	
The buzzer sounds, and the temperature exceeds the set	The incubator failure. The possible causes include:	1. Securely shut the door, and restart the unit after	



values $\pm 4^{\circ}\text{C}$.	1. The door of the incubator is not securely shut. 2. The refrigerant leaks. 3. The circulating fan does not work. 4. Control board failure	having the power off for two minutes. 2. Find out the leaking points, carry out repairing welding and recharge refrigerant. 3. Replace the circulating fan 4. Control board failure Replace the control board	
No humidification (The humidification light on the display screen is on)	Humidifier failure	Replace humidifier	
The humidity always displays "99.9"	① The humidity in the incubator is supersaturated ② There is an short circuit in the humidity sensor or the leading wire.	① Dehumidify the incubator or open the door of the incubator ② Change the humidity sensor	

Notes: In case the failures are not included in the above table or the above failures can not be removed, please contact the technical service department of our company or our maintenance points.

VI. Maintenance

1. The incubator must be kept in a well-ventilated and dry place away from sunshine. The distance between the unit and the wall shall not be less than 10cm.
2. The incubator shall be equipped with a three-pin plug which shall be reliably grounded, in order to ensure the normal operation and personal safety.
3. It is not allowed to clean the inner and exterior surfaces of the incubator with acid, alkali and other corrosive substances for the sake of beauty. It can be cleaned with neutral detergent and then wiped with dry cloth.
4. When replacing the fuse protector, the one with the same blowing current and the same dimension as marked in the fuse protector shall be selected.
5. During use, the incubator should be checked often to ensure that there is water in the humidifier tank.
6. When humidifying is not used, the water in the humidifier should be removed and dried.



7. When the incubator is not used, unplug it, and keep it dry and clean within.

8. The dirt on the condenser (at the back of the incubator) shall be cleaned every six months, so as to ensure a favorable heat dissipation during the operation.

VII. Transport and Storage

1. Transport

① Rough transport is not allowed.

② During the transportation, the incubator shall be inclined at an angle less than 45 degrees.

It is not allowed to place it flatwise or upside-down.

③ During the transportation of unpacked incubator, pay attention not to impact the refrigerating pipeline at the back of the incubator.

2. Storage

In case the incubator is not used for a long time before or after unpacking, it shall be stored in a place with the following conditions.

① Ambient humidity: 0 ~ 40℃

② Relative humidity: ≤80%RH;

③ Range of atmospheric pressure: 86kPa ~ 106kPa.

VIII. Out of box audit

1. After unpacking the incubator, you shall take out the Instruction Manual to check whether all the attachments are complete and whether the product specification conforms to the Manual according to the “List of Attachments”.

2. Please inspect and operate the incubator according to the Instruction Book.

IX. List of Attachments

Model	Name	SHH-250SD
1.	Instruction Manual	1
2.	Quality tracking card	1
3.	Supporting net	4
4.	Hook	18
5.	Drip tray	1

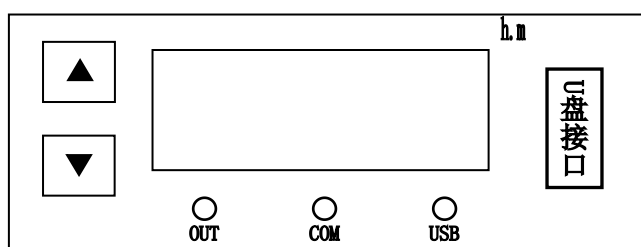


X.Instruction of the printer and USB controller (optional when ordering):

1、Accessories:

- ①: Switch Power Supply (AC: 100-264V; DC: 5V 4A)
- ②: The size of holes of the controller: 28*70 (millimeter);

2、Indication Panel of the incubator



- 1. Time window; display the current time (hours. minutes) under normal state;
- 2. OUT indicator light: when the light is on, it indicates that there is print output or data written into USB flash disk;
- 3. COM indicator light: flashing indicates that the current communication is normal;
- 4. USB indicator: when the light is on, it indicates that the current USB flash disk has been inserted correctly, and the data can be written in;
- ▲ 5. key (to increase): In normal state, click or long press this key to increase the setting interval time of USB flash disk data writing . In parameter setting state, click or long press this key to increase the setting parameter. When the setting value is the maximum, pressing this key again will automatically flip to the minimum value;
- ▼ 6. key (to decrease and confirm): In normal state, click or long press this key to decrease the setting interval time of USB flash disk data writing . In parameter setting state, click this key to switch setting parameters; long press this key to exit the setting state and save the setting values;
- ▼ 7. (composite key): In normal state, long press two keys at the same time; 3 seconds later, enter the parameter setting state;

3、Operation

After power on, the digital tube and indicator light are all on for 3 seconds, and enter the running state. The PRT indicator light on, the time window displays the current time (hours. minutes). The printer prints "print test", "current date" and "current data", and the OUT indicator light is on when printing output. After that, the data are printed according to the printing interval time, and when the date changes, the date will be printed.

- ▲ In normal state, click or , to set the printing interval. The setting range is 1-9999 minutes. In normal state, long press at the same time for 3 seconds , to enter the password-input state, and input the



corresponding password to adjust the time and parameters.

Prompts for abnormal conditions:

- The time window shows "TErr", which indicates communication error.
 1. Check whether the communication line with the instrument is connected correctly or not.
 2. Check whether the power is on.
- The time window shows UErr, which indicates there is an error in the reading and writing of the USB flash disk.
 1. Check whether the USB flash disk is inserted correctly;
 2. Format the USB flash disk or replace it;
 3. If USB storage is not required, you can enter the internal parameters to turn off USB flash disk function;

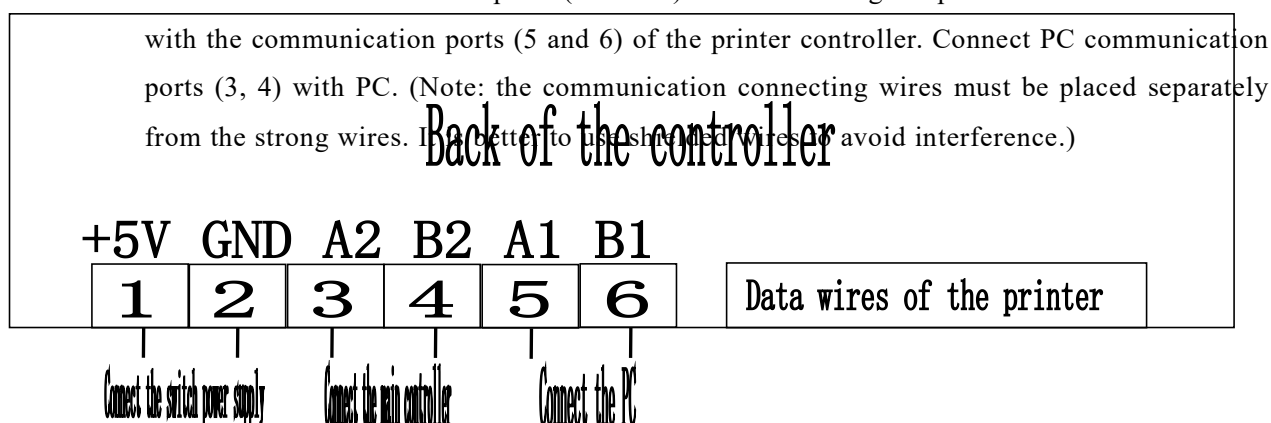
4、Internal parameters

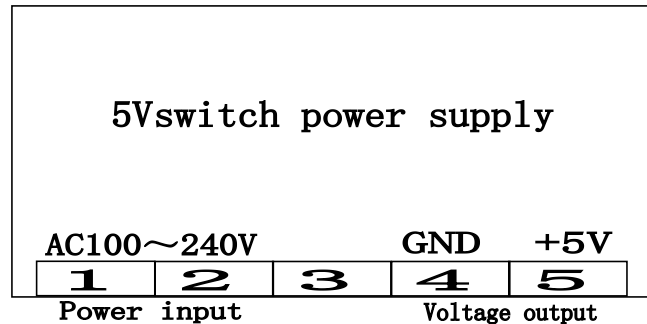
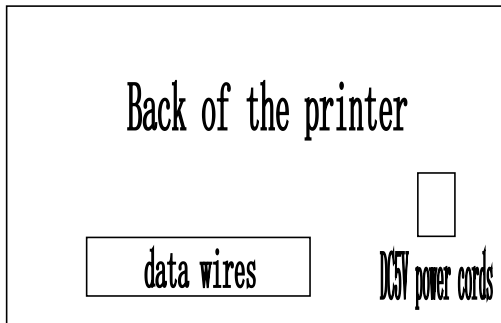
 In normal state, long press  at the same time for 3 seconds; "Lc00" displays; type the correct password 3 or 9, and click  again to enter the internal parameter. Then long press  for 3 seconds to exit that situation. The details are as follows:

Passw ord	Parameter indication	Parameter name	Instructions of function of parameter	Range
3	Y-	Year	Set the current date Year	00~99
	N-	Month	Set the current date Month	00~12
	d-	Day	Set the current date Day	00~31
	H-	Hour	Set the current date Hour	00~59
	n-	Minute	Set the current date Minute	00~59
	S-	Second	Set the current date Second	00~59

5、Wiring connection

1. As shown in the figure, connect pins 1 and 2 of the printer controller and power Cords of the printer (the red are positive) to 5V output terminals of power supply of switch(4 and 5 terminals); 1 and 2 pins of power supply of switch are connected with 220 V AC.
2. Connect the communication ports (A and B) of the matching temperature-control instrument with the communication ports (5 and 6) of the printer controller. Connect PC communication ports (3, 4) with PC. (Note: the communication connecting wires must be placed separately from the strong wires. It is better to use shielded wires to avoid interference.)





Special reminder:

- 1) In order to reduce the interference to the instrument during wiring, please pay attention to the separation of strong current lines (such as power lines and load lines) and weak current lines (communication data lines, etc.).
- 2) The cables between the printer and the controller must be compressed, otherwise there will be printing errors.
- 3) **The power supply of both the printer and its controller is DC5V, only the power supply at the switch needs to be connected to AC220V. Do not connect the terminals of high voltage power supply and low voltage power supply incorrectly.**
- 4) If the computer monitoring is not needed, communication ports of the PC does not need wiring. Please refer to the printer manual for maintenance and operation of the printer.

Special announcement

1. According to related regulations, the product, from the date of purchase, will be guaranteed for one year, except the man-made faults.
2. Our company reserves the right to change the design of the product. The design is subject to change without prior notice.
3. The Instruction Manual covers the contents of technical instruction.

XI. Wiring diagram

