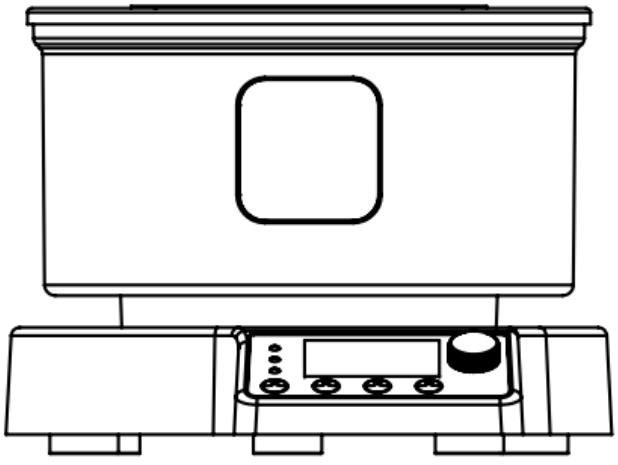
Stirring&Heating

SCILOGEX

User Guide



12302692

Ver.20231228

Catalogs

PREFACE 1

HOW TO GET HELP 1

QUALITY ASSURANCE 1

1 . SECURITY MATTERS 2

2. SCOPE OF USE 5

3. INSPECTION 6

3.1 UNPACKING AND INSPECTION 6

3.2 PACKING LIST 6

4. CONTROL AND DISPLAY 7

4.1 CONTROL 7

4.2 DISPLAY 8

5. OPERATION 10

6. HEATING FUNCTION 11

6.1 RESIDUAL TEMPERATURE WARNING (HOT) 13

7. STIRRING FUNCTION 14

8. TIMING FUNCTION 14

10. TROUBLESHOOTING 15

11. MAINTENANCE AND CLEANING 18

12. RELEVANT STANDARDS 20

13. TECHNICAL PARAMETERS 21

Preface

Welcome to "LCD Digital Collector Type Thermostatic Magnetic Stirring Bath Instruction Manual". Users should read this manual carefully before using this instrument to understand the relevant precautions and operate according to the instructions and specifications in the manual.

How to get help

If you have any questions or need assistance during installation and use, please do not hesitate to contact the manufacturer/supplier.

Please prepare the following information:

- Product serial number (on instrument nameplate)
- warranty card
- Description of the problematic phenomenon
- The method and procedure you used to solve the problem.
- Your contact information such as phone number, fax number and Email address.

Quality Assurance

According to the terms of the manufacturer's warranty, the instrument is warranted for 24 months under normal use, in case of problems related to the terms of the warranty, please

contact your local supplier. You can also send the instrument directly to the manufacturer by post, please include the packing list and a description of the problem, and you will be responsible for any transportation costs incurred.

1. Security matters

	**Warning!** ● Before operating the instrument, please read this manual carefully and observe the safety operation regulations. ● Professionally trained personnel should only operate this instrument.
	**Watch out for burns!** ● When touching the base of the instrument and the heating plate, please note that the maximum temperature of the heating plate of this instrument is 340°C. ● There will be residual warmth in the heating plate after the instrument is turned off, so please avoid burns.
	**Safety grounding protection!** ● For safety, make sure the power outlet is well grounded before using the instrument.

- Wear appropriate protective equipment when working, otherwise danger may be

caused by the following:

-Stirring liquid spills and vapors

-Toxic, flammable gases released

- Use the instrument in a large, well-ventilated area with a smooth, clean, non-slip, dry, and fire-resistant work surface. Do not operate the instrument outdoors, in a hazardous environment, or under water.
- Adjust the speed slowly and turn down the speed when the following conditions occur:

  -The instrument runs erratically and the container moves on the heating plate
- The setup temperature must be 50°C below the ignition point of the sample.
- Take care to avoid the following dangerous operations:

  -Stirring flammable samples with low boiling points

  -Mixing sample overfill

  -Use of unsafe containers
- An airtight container must be used when mixing pathogenic samples.
- When using a stirrer with a polytetrafluoroethylene (PTFE) housing:

  -At room temperature, monofluorine, trifluoride and alkali metals corrode PTFE and haloalkanes swell it.

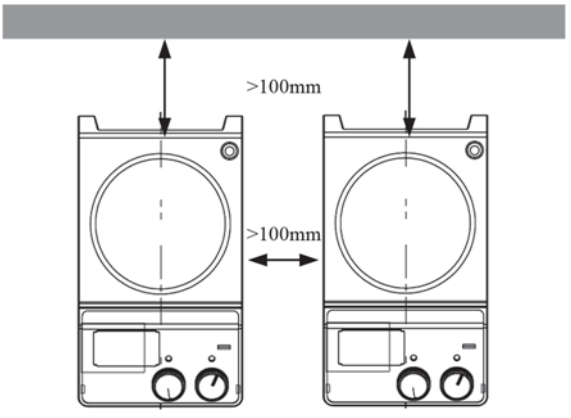
-Alkali or alkaline earth metals in molten state or in solution thereof, as well as powders of the second and third groups of the periodic table, react chemically with PTFE at temperatures of between 300 and 400 °C.

- Make sure that the instrument and its accessories are undamaged before turning it on each time. Use the standard accessories listed in the "Accessories" section and follow the instructions to ensure safety. Make sure that the accessories are securely attached to the instrument so that they do not become detached. Turn off the power before loading or unloading the accessories.
- The tip of the external temperature sensor is at least 5-10 mm from the bottom of the container and 5-10 mm from the wall of the container.
- The instrument can only be completely de-energized by unplugging it.
- Make sure that the power supply voltage is the same as the nameplate.
- Ensure that the power cord is kept away from the heating plate and that the instrument is not covered while in use.
- Only professionally trained personnel should open this instrument.
- Do not use this instrument in areas with strong magnetic fields.
- Use of this instrument in explosive environments is prohibited; this instrument is not explosion-proof.

2. Scope of use

This instrument is designed for use in applications such as schools, laboratories and factories for heating liquids for use in the following environments:

- Altitude not exceeding 2000 meters
- Temperatures from 0°C to 40°C
- Installation type: the product is designed to be connected to an indoor socket with voltage fluctuations not exceeding ±10% of the normal value
- The minimum distance between instruments and between instruments and walls is 100mm.



This instrument is not suitable for application in residential areas and under some of the limitations specified in Chapter 1.

3. Inspection

3.1 Unpacking and inspection

Users are advised to note any damage to the packaging on the receipt. If any internal damage is found after unpacking, please also contact the local supplier or manufacturer.

Attention:

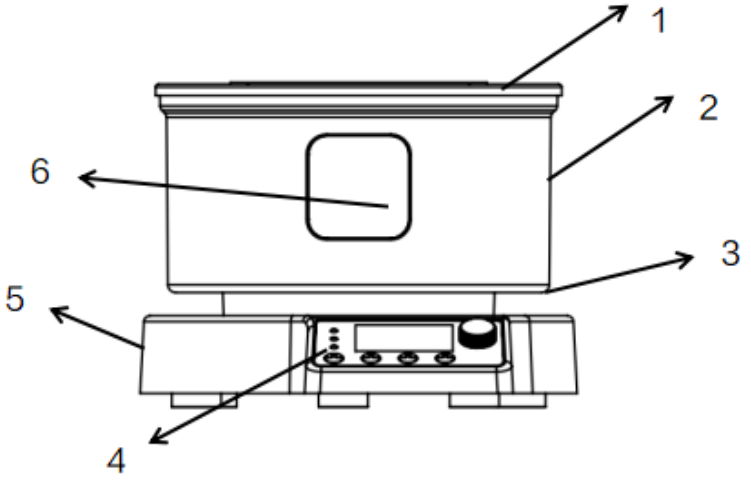
Do not connect the instrument to the power supply if you notice any visible damage on the instrument.

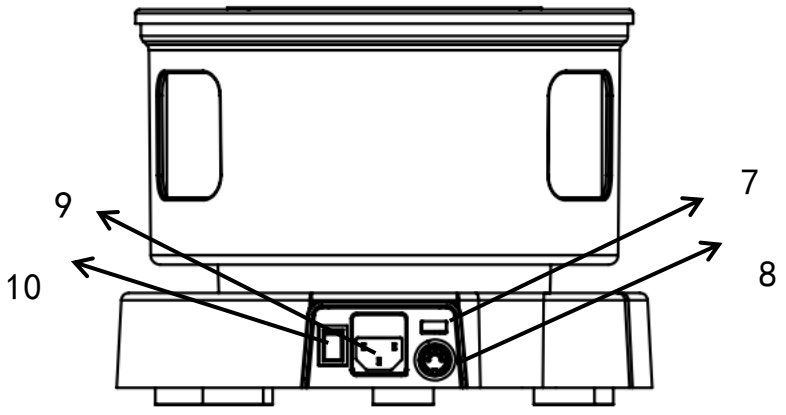
3.2 Packing list

Name (of a thing)	Quantities
Hosts	1
Cable	1
Stirrer	1
User Manual	1

4. Control and display

4.1 Control



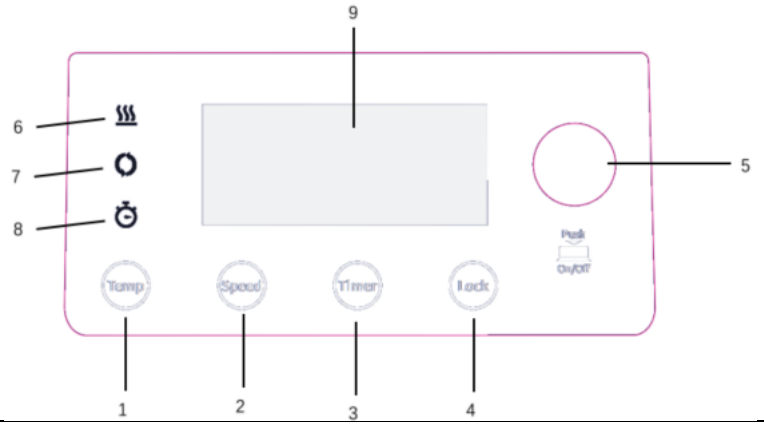


1	Top cover assembly	6	Viewing Windows
2	Protective cover for housing	7	USB data interface
3	Status Light	8	PT1000 Interface
4	Control Panel	9	Power Connector
5	Foundation	10	Power Switch

※The USB data port is for internal use.

4.2 Display

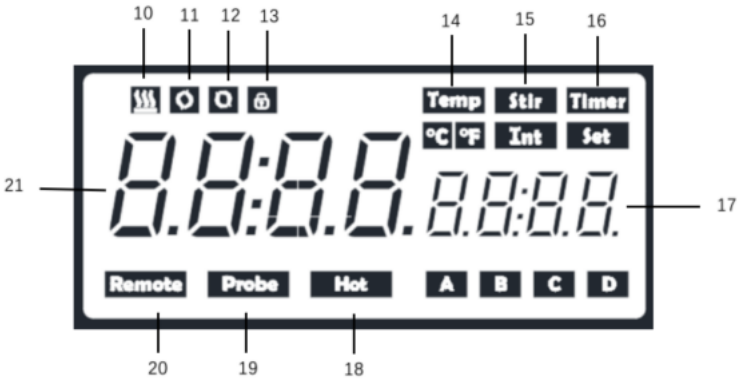
1. Control panel



1	Heating mode touch button	6	Heating status indicator
2	Mixing Mode Touch Keys	7	Mixing status indicator
3	Timer Mode Touch Keys	8	Timing status indicator

4	Keypad Lock	9	Interface Display
5	Adjustment knob buttons		

2. Display



10	Heating output display icon	16	Timing screen display icons
11	Counterclockwise stirring display icon	17	Target Parameter Display Icon
12	Clockwise stirring display icon	18	High Temperature Display Icon
13	Key lock display icon	19	External Sensor Display Icon
14	Temperature interface display icons	20	Data Interface Display Icons
15	Mixing interface display icons	21	Real-time parameter display icons

Attention:

When the heating and stirring functions are switched on at the same time

When the heating and stirring functions are switched on at the same time, the temperature value is displayed in priority.

5. Operation

- Check that the operating voltage specified on the nameplate matches the grid voltage.
- Power outlets require good grounding
- Turn on the power and perform power-on self-test
- Add bath liquid to the bath
- Select a suitable stirrer and put it into the container, fill the sample to be stirred.
- Place the container in the instrument slot
- Setting the mixing speed and starting the mixing
- Observe the work of the stirrer
- Setting the heating temperature and starting the heating
- Observe the actual temperature displayed on the LCD screen

- Setting the mixing time
- Turn off the heating function and stirring function

If the above operation runs normally, the instrument is ready for official use. If the operation is not normal, the instrument may have been damaged during transportation, please contact the manufacturer/supplier's after-sales service center.

The green light flashes when the heating function is running and lights up when it reaches the set temperature; in addition, the green light lights up when only the stirring function is turned on.

	**Attention:** Please do not remove the container during the operation of the instrument. Once the container is detached from the working disk surface of the instrument, stop the stirring function before placing the container again, and start the stirring again after the container is placed.

6. Heating function

This machine uses an external temperature sensor PT1000, after accessing the external temperature sensor, the "Probe" character is displayed all the time, indicating that the

external temperature sensor starts to work. The LCD screen displays the real-time temperature of the external temperature sensor.

1. Click the heating mode touch button 

, the display switches to the temperature function interface, rotate the encoder so that the target parameter is adjusted to the desired parameter. Press the encoder knob real-time parameter temperature begins to rise until the target parameter.
2. When heating is turned on, the status light starts breathing and flashing. When the target temperature ±3℃ is reached, the status light becomes normally lit.
3. An external temperature sensor allows for more precise and faster control of the temperature of the sample than the built-in temperature control. The external temperature sensor must be placed in the ambient liquid, not in the heated sample. If an abnormality is detected, the heating module will automatically shut down, in which case do the following:

   -Power off

   -Ensure that the external thermostat is immersed in the heated sample.

   -Turn on the power, set the target temperature and turn on the heating function

   -If the instrument does not return to normal operation, contact the manufacturer/supplier.

The temperature in the setup area when the instrument is turned on is the setup temperature when the instrument was last turned off. In common use, there may be a difference between the setup heating temperature display value and the following actual temperature:

- Heating plate center and outer edge
- Containers and samples in containers

These differences exist due to thermal conduction properties. To ensure accurate temperatures in the vessel, use an external temperature sensor PT1000.

6.1 Residual temperature warning (HOT)

To prevent burns, the instrument has a residual heat warning function (Hot):

When the built-in temperature sensor is greater than 50℃, "Hot" character appears on the LCD screen to warn the instrument that the temperature is too high and there is a danger of scalding.

After the heating function is turned off, if the temperature of the heating plate remains above 50°C, the character "Hot" appears on the LCD screen to warn that the instrument temperature is too high and there is a danger of scalding.

After closing the main switch of the instrument, the LCD display continues to flash, and the actual value area alternately displays the current temperature of the heating plate and

the "Hot" character, at which time the user can still set the rotational speed and other parameters, and when the temperature of the heating plate falls below 50°C, the instrument will automatically cut off the power.

If the user needs to turn off the LCD screen immediately, he/she can simply unplug the power supply. The Residual Heat Warning function cannot be operated in case of mains failure or with the power plug unplugged.

7. Stirring function

Select the suitable stirrer into the container, click the stirring mode touch button, the display switches to the stirring function interface, rotate the encoder so that the target parameter is adjusted to the desired parameter. Press the encoder knob real-time parameter speed starts to increase until the target parameter. The rotational speed in the setting area when the instrument is turned on is the set rotational speed when the instrument was last turned off.

8. Timing function

Click the timer mode touch button, the display switches to the timer function interface, rotate the encoder and adjust to the desired time. Press the encoder knob real-time parameters begin to countdown until the time to zero, the instrument issued three beeps. Instrument timing mode is only valid for heating mode.

	**Attention:** Unplugging and unplugging the serial port cable while the power is on is prohibited.

10. Troubleshooting

- The instrument does not start when the power is turned on

  -Check that the power cord is securely connected

  -Please check the power supply fuse for damage or looseness.

- Instrument power on self-test is not normal

  -Please turn off the instrument and restart it.

- Rotation speed cannot reach the set value

  -This function may cause abnormal deceleration when the viscosity of the medium liquid is too high.

- Instrument does not power up when the instrument is turned off

  -Heating plate temperature is higher than 50 ℃, waste heat warning function is turned on

- trouble reporting

Description & Conditions	coding	troubleshooting
During the heating process, when the external temperature sensor is removed, an error occurs and the status light turns red.	ER3	After checking the external sensor, reposition the sensor to the liquid and press any button.
During the heating process, the external temperature sensor reports an error when it is 20℃ over the target temperature, and the status light turns red.	ER4	Reboot, cool down and re-operate the machine.
Hardware protection temperature detection, built-in temperature reaches about 350 ℃ error report, status light turns red	ER5	Turn off the power, cool down and re-operate the machine.
When the heating is not turned on, the temperature	ER6	Just press any button.

automatically rises by 20°C reporting an error and the status light turns red		
When mixing is turned on, no speed detected error is reported and the status light turns red	ER8	Turn off the power and restart the machine.
The temperature sensor is not placed correctly or not put into the container when heating, and the temperature rise is less than 2°C when heating is turned on for 7min.	ER9	Check that the external sensor is not placed inside the heated liquid.

If the problem is not solved, contact the manufacturer/supplier.

11. Maintenance and cleaning

Proper use and maintenance of the instrument to keep it in good working condition can prolong the service life of the instrument. Keep the instrument dry and clean during routine work, remove spilled liquids quickly, clean external surfaces with a non-abrasive cleaner and do not connect the power supply until all surfaces are dry. If liquid or wet solids get inside the instrument, quickly disconnect it from the power supply and do not use it again, contact the manufacturer/supplier for further advice.

- Keep the instrument tidy and do not allow the cleaning solution to flow into the machine.
- Power must be disconnected before maintenance and cleaning, please use our recommended method to clean the instrument. Removal Method:

Color	Isopropanol
Building material	Aqueous solution containing active agent/isopropyl alcohol
Cosmetic products	Aqueous solution containing active agent/isopropyl alcohol
Foods	Aqueous solutions containing active agents

Fuel oil	Aqueous solutions containing active agents

- Consult the manufacturer for materials not listed in the above table. Before using any other cleaning method, the user must confirm with the manufacturer that the method will not damage the instrument. Wear suitable protective gloves when cleaning the instrument.

12. Relevant standards

The structure of the instrument complies with the following safety standards
EN61010-1 UL61010-1 CAN/CSAC 22.2(1010-1) EN61010-2-10
The instrument structure complies with the following EMC standards
EN61326-1
Complies with the following EU standards
EMC standard: 89/336/EWG Mechanical design standard: 73/023/EWG

Attention:

- Electronic devices should not be cleaned with cleaning agents.
- Instruments sent for repair must be cleaned while avoiding contamination with hazardous substances and returned to the original box in which they were sent.
- When the product is not used for a long time, please store the

	instrument without power and place it in a dry, clean, room temperature and smooth place.

13. Technical parameters

Model number	3L	5L
Plate Material	Stainless steels	Stainless steels
Motor type	Brushless DC motor	Brushless DC motor
Stirring positions	1	1
Maximum stirring volume [H2O]	3l	5l
Maximum stirrer size [length]	40mm	40mm
Speed range and step	100~1500rpm, step ±10rpm	100~1500rpm, step ±10rpm
Speed Display	LCD	LCD
Temperature display	LCD	LCD
Heating temperature range	Room temp~220℃	Room temp~220℃
Temperature control accuracy of heating liquid	±1°C	±1°C
overheating protection	350°C	350°C
Temperature display accuracy	0.1°C	0.1°C
External temperature sensor	PT1000	PT1000
Waste heat warning function	50°C	50°C
buzzers	Yes	Yes
Positive and negative rotation	Yes	Yes
Protection class	IP21	IP21
Motor output power	20W	20W
Heating output power	850W	850W

Power	900W	900W
Voltage,Frequency	100-120V,60Hz; 200-220V,50Hz	100-120V,60Hz; 200-220V,50Hz
Bath size	Φ220×105	Φ240×135
Heating pot material	High borosilicate glass	High borosilicate glass
Maximum volume of flasks that can be placed	3L	5L
Dimensions [L x W x H]	343×215×283mm	343×228×283mm
Weights	6.0kg	6.7kg
Timer function	1min-99h59min	1min-99h59min
Permissible ambient temperature and humidity	5-40°C, 80%RH	5-40°C, 80%RH