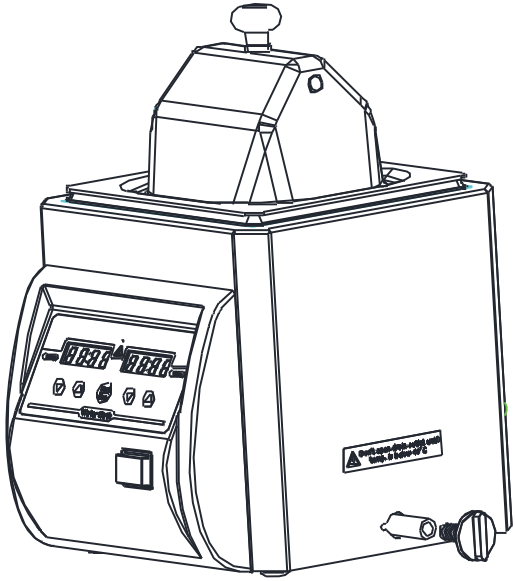
LABGIC

Thermostat Water Bath

LWB2L series

Operations manual



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Preface

Thank you for purchasing our Products: Thermostat Water Bath. This Manual for users contains function and operation of the Instrument. In order to use the instrument properly, please read this manual carefully before using the Instrument.

Opening Check

Please check the Instrument and Appendix with the packing list when you first open the instrument packing case. If you find there is something wrong with the Instrument and the Appendix, do contact the vendor or the producer.

Safety Warnings and Guidelines

1. Important operation information of the security

Before using the instrument, user need have a complete understanding how to operate it safety.

Before running the instrument, please read the manual carefully.

Forbid anyone to operate the instrument before reading the manual.

If operate not in accordance with the tips on the manual ,the heat generated by the instrument at runtime may cause severe burns, and electric shock accident. Please read the following safety tips and guidance, and implementation of all precautions.

2. Safety

When operation, maintenance and repair of this instrument, it must subject to the following basic safety precautions. if you don't abide by the warnings pointed in the manual , may affect the protection and intended use scope of the instrument.

The instrument is GB9706.1 standard I class B common devices. The instrument is for indoor use.

Before operating this equipment please read this manual carefully, otherwise it may cause personal injury.

Only in the aspect of how to use electrical equipment installation trained qualified inspection personnel to operate the equipment.

Operators do not attempt to open or repair equipment, doing so will make you lose the warranty qualification, also may be limited by electric shock. If you need repair, please contact our company.

Before connecting the power supply, ensure the power supply voltage and the instrument voltage required the same. And make sure that the power outlet rated load no less than the instrument requirements.

If the power cord damaged, replace it according to the same type and specifications. Don’ t press anything on the power cord when it be used, don't put the power cord in place where people often walk.

When insert the power cord plug, must hand-hold the plug and ensure that the plug is completely inserted into the socket, when pull out the plug, must hand-hold the plug as well and don't pull the power cord.

The instrument should be put in lower humidity and less dust and away from water and avoid direct sunshine and strong light, indoor should be well ventilated, no corrosive gas or strong magnetic field interference, away from heat, stoves and other heat sources. Don't take equipment in wet or dusty places.

Shutting off the power when stop working. unplugging the plug and using soft cloth or plastic cover to prevent dust from entering the instrument when long time no use.

When happened as following listed cases, it should be pulled the power socket immediately and contact the supplier or trained maintenance personnel:

- Liquid into instrument;
- Instrument damaged by rain or water;
- Instrument don't work properly, especially appear any abnormal sound or smell;
- Instrument drops or shell damage;
- Instrument functions have obvious changes.

3. The maintenance of Instrument

The water bath should be cleaned by the cloth stained with a little alcohol. If there are smutches on the Instrument, clean them by soft cloth stained with cleaning cream.

Chapter I Introduction

The Thermostat Water Bath is a temperature-controlled thermostat bath equipment. This durable and dependable water bath comes with a variety of safety and convenience features. It has a unique lid design that allows condensation to drain back into the tank without spilling onto the work area. High efficiency insulation maintains temperature stability and uniformity within the bath, while keeping the housing cool to the touch.

Features:

• Digital set-up for temperature and time with independent LED display.

• Microprocessor control, uniform temperature control, high precision.

• Easy-to-clean stainless steel inner tank, with unique sealing structure to avoid water leakage.

• The side of the tank is equipped with an independent drain, which can easily drain the sewage after cleaning.

• The lid's gabled design will divert condensation to the front and back of the tank, away from samples.

• Built-in water level detection device to prevent the danger of dry burning.

• Over-heating protection device is included.

Chapter II Specification

1. The normal operation condition

Ambient temperature: 0°C~35°C

Relative humidity: ⩽70%

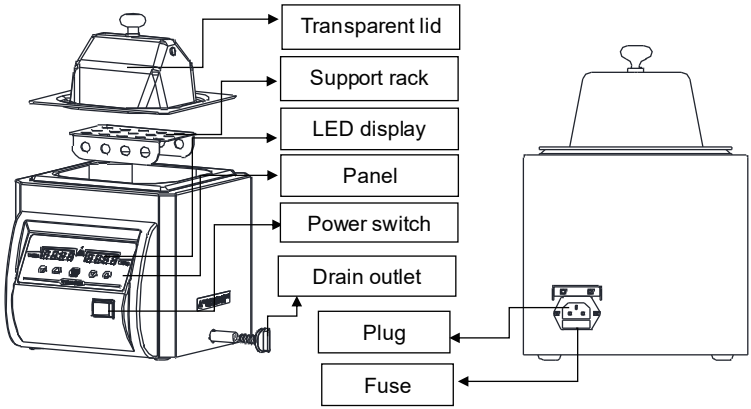
Power supply: AC220/50-60Hz

2. The basic parameters and performance

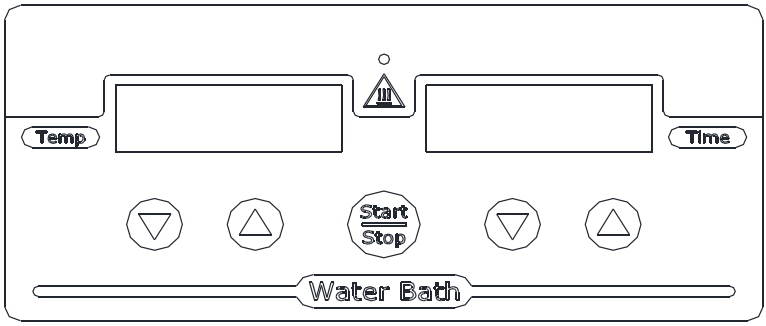
Model	LWB2L-1	LWB2L-2	LWB2L-3
Temp. setting range	0°C-100°C		
Temp. control range	RT.+5°C-100°C		
Timing range	1min~99h59min/∞		
Temp. accuracy	⩽±0.3°C @37°C		
Display accuracy	0.1°C		
Temp. uniformity	⩽±0.3°C @37°C		
Heating time	⩽ 30min(25°C~100°C)		
Number of tanks	1	2	3
Tank capacity	1×2L	2×2L	3×2L
Working area	125×100×115mm	125×100×115mm×2	125×100×115mm×3
Power	300W	600W	900W
Voltage	AC220V/50-60Hz		
Fuse	250V 3A Φ5×20		
Dimension(mm)	206×254×310mm	397×254×310mm	588×254×310mm
Weight(kg)	2.2kg	5.5kg	8.5kg

Chapter III Preparations

1. Structure Description



2. Operation panel



Key	Function
Start/Stop	Press momentary to start. Press continuously (>2 sec) to stop.
Temp▲▼	Short press to adjust temp. value, long press to move cursor.
Time▲▼	Short press to adjust time value, long press to move cursor.

Chapter IV Operation Guide

1. Parameters setting

1.1 Parameters in LED display

When the instrument powers on, system will enter into parameters setting interface with the sound of "di…"

37.0°C	00 : 10

Left LED display shows temperature value.

Right LED display shows timer value.

1.2 Temp. setting

37.0°C

In **STOP** status, short press **Temp**'s ▲/▼ to adjust temperature value, long press **Temp**'s ▲/▼ to move cursor, and set temperature rapidly.

1.3 Timer setting

00 : 10

In **STOP** status, short press **Time**'s ▲/▼ to adjust speed value, long press **Time**'s ▲/▼ to move cursor, and set time rapidly.

If you want to keep running with setting temperature value, press **Time**'s ▼ to "--:--".

Note: "--:--" means procedure will keep running, unless it is outage or you stop running.

1.5 Start/Stop

After finishing setting parameters, press **Start/Stop**, system will run automatically. In that time, the indicating light flickers. It means that the system is heating to the setting temperature value. When the system reaches the setting temperature value, indicating light will be on. The system starts to countdown.

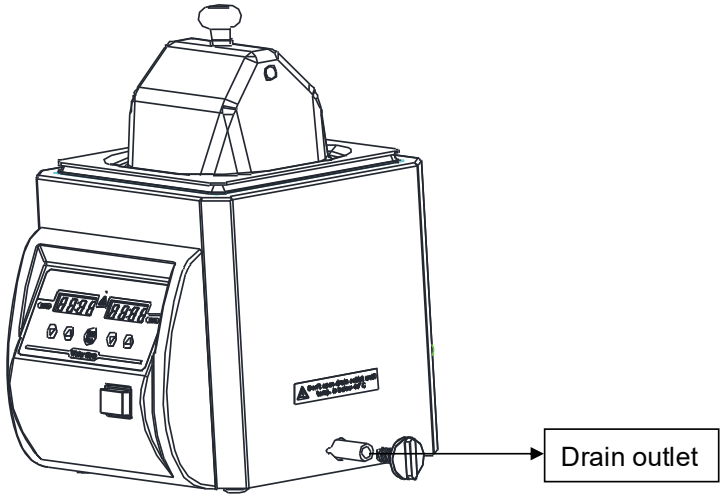
During running, long press Start/Stop, system will stop running, and return to parameters setting interface.

When time is over, the system stops running. The value of temperature in LED displays current temperature. The value of time in LED displays “FINISHED”, it means running is over. After finishing running, the user press any key to enter into parameters setting interface.

Note: After finishing running, the temperature of tank inside is still quite high. Please be careful, wait for a while to take out the samples.

Chapter V Tank Drain Operation Guide

When the temperature is below 40°C, pull the drain outlet, open the sealing cap, and drain the water. After the water is drained, screw on the sealing cap and plug the drain back.



Note: It is forbidden to release water at high temperature to avoid burns!

Chapter VI Temperaure Calibration

The temperature of the instrument has been calibrated before it is sold out. But if there is deviation between the actual temperature and the displayed temperature due to some reasons, you can do as follows to correct the error.

Note: Both the circumstances temperature should be lower than 35°C.

Adjustment methods as follows:

1. Put a thermometer probe into water bath which is with water. (make sure the precision of the thermometer sensor should be within ±0.1°C and thehermometer probe should be absolutely immerged into the water). When calibration, please close the lid.

2. In Stop status, pressing "TEMP▲" and "TEMP▼" simultaneously, power on the instrument at the same time. It will enter into temperature calibration mode. The instrument will heat up to 40.0°C automatically. 40.0°C

3. When the temperature reach 40.0°C, the cursor position will flicker, the thermometer shows actual temperature.

4. If the actual temperature of thermometer is 39.8°C. Press "TEMP▲▼" to adjust temperature to reach 39.8°C, then press Start/Stop key to confirm. 39.8°C

5. Then system will automatically heat up to next calibration. Users need to repeat above steps and input data at each calibration. After calibration, screen shows succeed and remind users to reboot system.

Note: If users want to exit calibration, please power off then restart instrument.

If power off or power outage during calibration, so this calibration is invalid.

Chapter Ⅶ
Failure analysis and processing procedures

No	Phenomenon	Possible Causes	Processing Procedure
1	Display window doesn' t response after power-on	No power	Check the connection of power
		Bad fuse	Exchange the switch
		Switch failure	Exchange the fuse
2	The actual and displayed temperatures are quite different.	Broken sensor	Contact to supplier or manufacturer
3	No heating	Broken heating control IC	Contact to supplier or manufacturer
4	Press invalid	Damaged key	Contact to supplier or manufacturer
5	DErr in display	Abnormal sensor data	Contact to supplier or manufacturer
6	IErr in display	Sensor initialization failed	Contact to supplier or manufacturer
7	-Err in display	Low water or add water during running	Reboot or press Start/ stop key to remove the wrong indication

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