

INSTRUCTION MANUAL



LLG-uniBLOCKTHERM




Dry Bath

Users should read this manual carefully, follow the instructions and procedures, and be aware of all the cautions when using this instrument.

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1. Safety Instructions

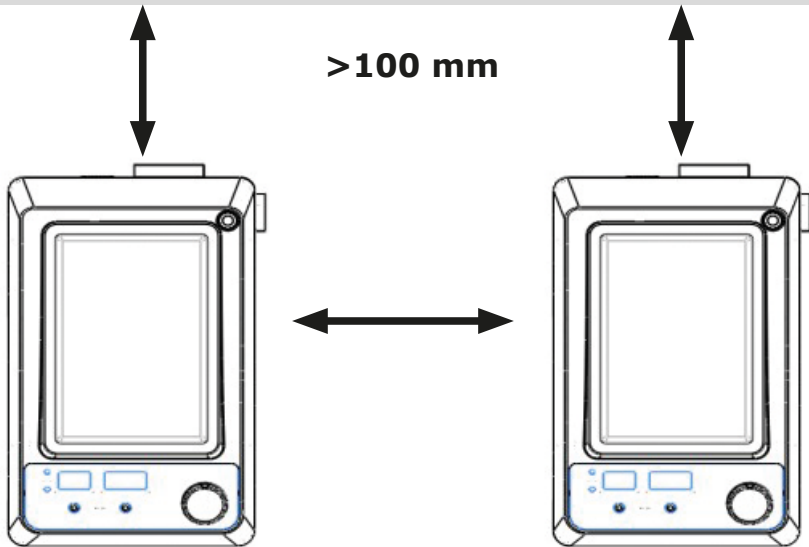
	<p>Warning!</p> <ul style="list-style-type: none"> • Read the operating instructions carefully before use. • Ensure that only trained staff works with the instrument.
	<p>Risk of burn!</p> <ul style="list-style-type: none"> • Caution when touching the housing parts and the dry bath which can reach temperature of 120 °C. • Pay attention to the residual heat after switching off.
	<p>Protective ground contact!</p> <ul style="list-style-type: none"> • Make sure that the socket must be grounded (protective ground contact) before use.

- When working wear personal protection to avoid the risk from:
 - Splashing and evaporation of liquids
 - Release of toxic or combustible gases
- Set up the instrument in a spacious area on a stable, clean, non-slip, dry and fireproof surface. Do not operate the instrument in explosive atmospheres, with hazardous substances or under water.
- Temperature must always be set at least 50 °C lower than the fire point of the media used.
- Be aware of hazards due to:
 - Flammable materials or media with a low boiling temperature
 - Overfilling of media
 - Unsafe container
- Process pathogenic materials only in closed vessels.
- Check the instrument and accessories prior to each use.
- Do not use damaged components. Safe operation is only guaranteed with the accessories provided by the manufacturer. Accessories must be securely attached to the device and can't come off by themselves. Always disconnect the plug before fitting accessories.
- The instrument can only be disconnected from the main power supply by pulling out the main or the connector plug.
- The voltage stated on the label must correspond to the main power supply.
- Ensure that the main power supply cable does not touch the dry bath. Do not cover the device.
- The instrument may only be opened by experts.

2. Proper Use

The instrument is designed for heating liquids in schools, laboratories or factories.

- Observe the minimum distances between the devices, between the device and the wall and above the assembly (min. 100 mm)



3. Inspection

3.1 Receiving Inspection

Unpack the equipment carefully and check for any damages which may have arisen during transport. Please contact manufacturer/supplier for technical support.



Note:

If there is any apparent damage to the system, please do not plug it into the power line.

3.2 Listing of Items

The package includes the following items:

Items	Qty
LLG-uniBLOCKTHERM	1
Power cable	1
User Manual	1
Plastic cover	1
Block remover tool	1

4. Control

4.1 Control elements

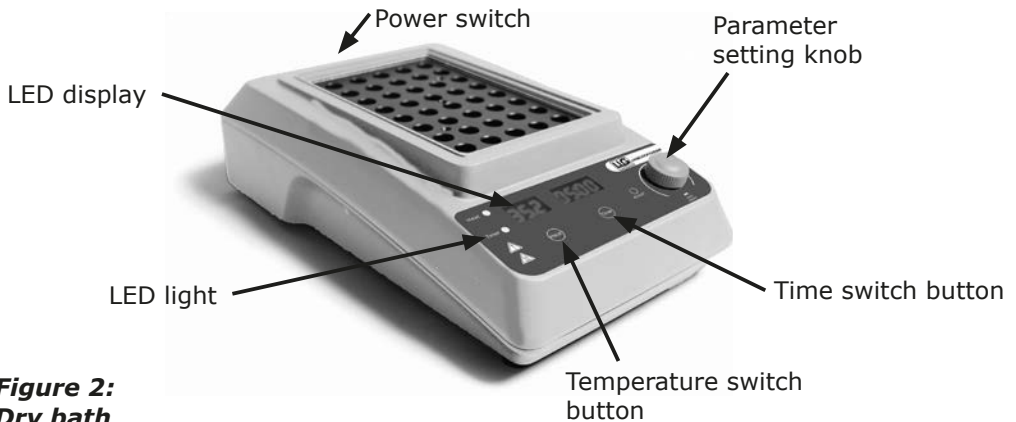


Figure 2:
Dry bath

Items	Descriptions
Temperature switch button	Press the button to set the target temperature
Time switch button	Press the button to set the target time
LED Display	LED displays the real working state and all settings.
LED Light	The LED light shows green when the parameter is set
Parameter setting knob	Rotate the knob to set the target parameters, press the knob to turn on the settings
Power Switch	Switch ON or OFF the instrument

4.2 Display



Characters	Descriptions
Temperature display area	<p>Press the temperature switch button, the characters in the temperature display area will be flashing. Rotate the parameter setting knob to set the target temperature. Press the temperature switch button again to save the setting.</p> <p>When the heating function is switched ON, the LED temperature light will turn green and the temperature display area displays the actual temperature value until it reaches the set point.</p>
Time display area	<p>Press the time switch button, the characters in the time display area will be flashing. Rotate the parameter setting knob to set the target time. Press the time switch button again to save the setting. The LED time light will turn green, then start countdown. For continuous heating the time has to be set to "00:00".</p>

5. Trial Run

- Make sure the required operating voltage and power supply voltage match.
- Ensure the socket must be properly grounded.
- Add the medium into the vessel
- Place vessel on the work plate.
- Plug in the power cable, ensure the power is on and begin initializing.
- Set the target temperature and begin.
- Set the time, if not, the machine will work continuously
- Observe the LED display

If these operations above are normal, the device is ready to operate. If not, the device may be damaged during transportation, please contact manufacturer/supplier for technical support

6. Function: Heating

The device is controlled by digital temperature control technology, and it has an over temperature protection, the safety temperature is 140 °C.

Press the temperature switch button, the characters in temperature display area will be flashing, and then rotate the parameter setting knob to set the target temperature, press the temperature switch button to save the setting.

Note:

- Set the temperature via rotating the parameter setting knob slowly to the target value.
- When the heating function is switched on, the LED displays the temperature value on the left-hand side.
- The heating function is switched on or off by pushing heating knob.

The instrument automatically displays the last parameters once turned on.

Generally, the LED screen cannot display the actual temperature of sample in the vessel or of the dry bath surface.

7. Function: Timing

The device can work in accordance with the timing mode or continuous operation mode.

Timing Mode: Press the time switch button, the characters in the time display area will be flashing, and then rotate the parameter setting knob to set the target time, press the time switch button again to save the setting.

During operation, it can be stopped at any time by pressing the timer control knob. If the knob is pressed again, it will start again and the timer will restart countdown.

When the timer reaches zero, the unit will be automatically halted. The countdown starts immediately after pressing the parameter setting knob. If you like to start

the countdown later e.g. if the temperature of the block is reached, press the time switch button after starting the heating by pressing the parameter setting knob.

Doing this, the time in the display area will be flashing and the timer does not count. The countdown will be started if you press the time setting button again.

Continuous Mode: Press the time switch button, the characters in time display area will be flashing, make sure the setting time is „00:00“, press the parameter setting knob to turn on the continuous operation mode.

8. Faults

- Instruments can't be powered ON
 - Check whether the power line is unplugged
 - Check whether the fuse is broken or loose
- Fault in power on self-test
 - Switch OFF the unit, then switch ON and reset the instruments to factory default setting.

If these faults are not resolved, please contact your local supplier.

9. Maintenance and Cleaning

- Proper maintenance can keep instruments working properly and lengthen its lifetime.
- Do not spray cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.
- Only use recommended cleansers:

Dyes	Isopropyl alcohol
Construction materials	Water containing tenside / Isopropyl alcohol
Cosmetics	Water containing tenside / Isopropyl alcohol
Foodstuffs	Water containing tenside
Fuels	Water containing tenside

- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method will not harm the instrument. Wear the proper protective gloves during cleaning of the instrument.



Note:

- Electronic device cannot be cleaned with cleanser.
- If you require maintenance service, the instrument must be cleaned in advance to avoid pollution of hazardous substances, and it has to be send back in original packing.
- If the instrument will not be used for a long time, please switch off and place it in a dry, clean, and stable location at room temperature.

10. Associated Standards and Regulations

Construction in accordance with the following safety standards:

EN 61010-1
 UL 3101-1
 CAN/CSA C22.2 (1010-1)
 EN 61010-2-10

Construction in accordance with the following EMC standards:

EN 61326-1

Associated EU guidelines:

EMC-guidelines: 89/336/EWG
 Instrument guidelines: 73/023/EWG

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

11. Specifications

Items	Specifications
Voltage	100~120/200~240 VAC
Frequency	50/60 Hz
Power	160 W
Dimension of blocks	150×95 mm
Heating temperature range	Room temp. +5 °C to 120 °C
Temperature display	LED
Control accuracy	± 0.5 °C
Safety temperature	140 °C
Timer	yes
Time setting range	1 -99 h 59 min
Operation type	Continuous/ timed operation
Dimensions (W × D × H)	175×290×85 mm
Weight	1.6 kg (without heating block)
Permissible ambient temperature	5 - 40 °C
Permissible relative humidity	80 %
Protection class according to DIN EN 60529	IP 21

12. Ordering Information

Cat No.	Descriptions
6.263 460	LLG-uniBLOCKTHERM, LED digital dry bath, Euro plug, 200-240 V, 50 Hz/60 Hz
6.263 461	LLG-uniBLOCKTHERM, LED digital dry bath, UK plug, 200-240 V, 50 Hz/60 Hz
6.263 462	Heating block for 54 x 0.2 ml tubes
6.263 463	Heating block for 40 x 0.5 ml tubes
6.263 464	Heating block for 40 x 1.5 ml tubes
6.263 465	Heating block for 40 x 2.0 ml tubes
6.263 466	Heating block for 28 x 5/15 ml tubes
6.263 467	Heating block for 8 x 50 ml tubes
6.263 468	Heating block for 96/384 microplate
6.263 469	Heating block for 18 x 0.2 ml + 18 x 0.5 ml + 18 x 1.5 ml/2 ml tubes
6.263 433	Block remover tool
6.263 434	Lid for LLG-uniBLOCKTHERM

13. WARRANTY

This product is warranted to be free from defects in material and workmanship for a period of three (3) years from date of purchase.

This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this instruction manual. This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in original material or workmanship. This warranty does not cover any incidental or consequential damages, commercial loss or any other damages from the use of this product.

The warranty does not cover damage to paint or finish and defects or damages caused by physical and chemical abuse or normal wear and tear. The warranty is invalidated by any non-factory modification, which will immediately terminate all liabilities on us for the products or damages caused by its use. The buyer and its customer shall be responsible for the product or use of products as well as any supervision required for safety. If requested the products must be returned to the distributor in well packed and insured manner and all shipping charges must be paid.

Information on the disposal of electrical and electronic devices in the European Community:

The disposal of electrical devices is regulated within the European Community by national regulations based on the European Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). According to these regulations, any devices supplied after 13.06.05 in the business to business sphere, to which this product is assigned, may no longer be disposed of in municipal or domestic waste. They are marked with the following symbol to indicate this. As disposal regulations within the EU may vary from country to country, please contact your supplier if necessary.

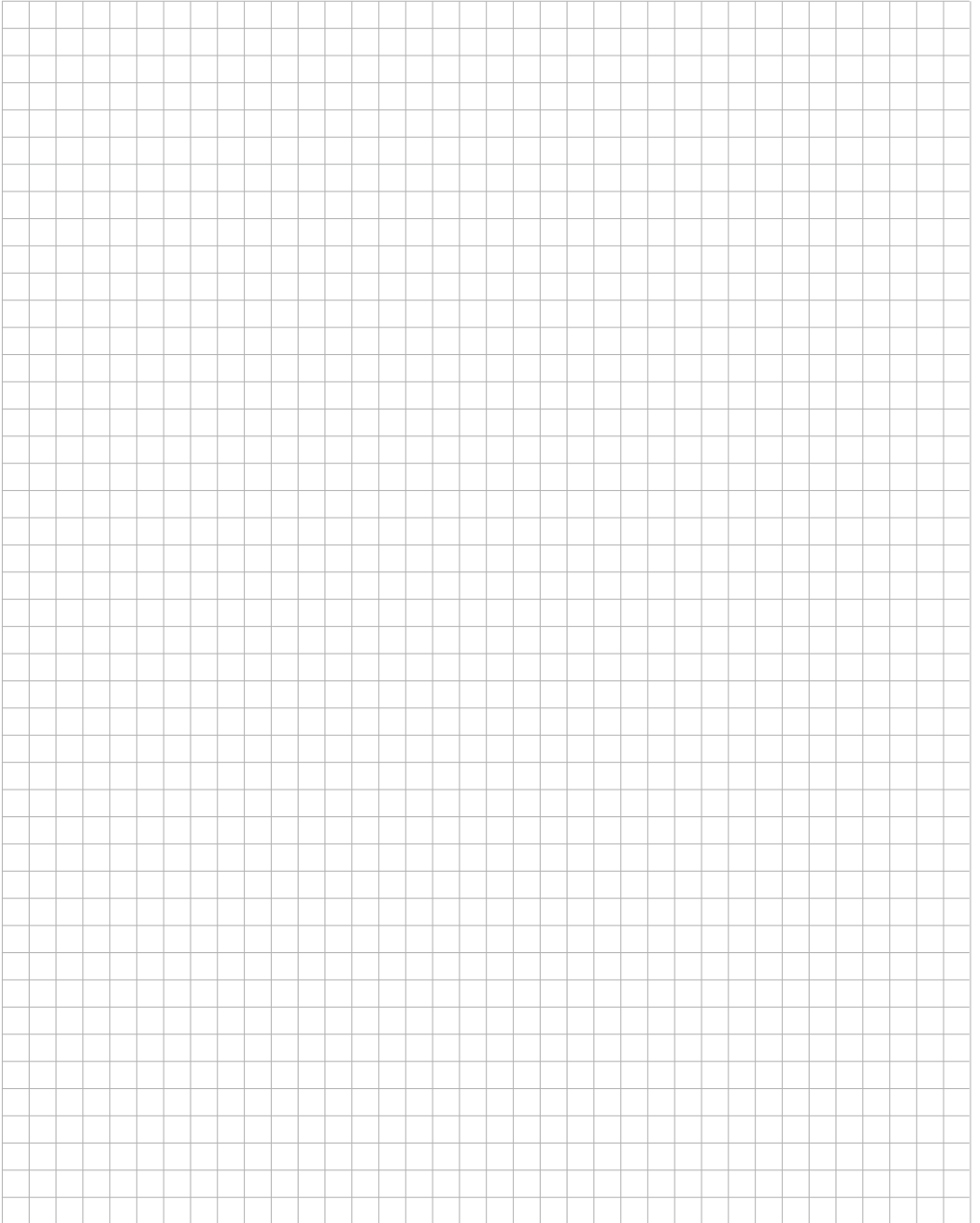
This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 36 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.

For claims under the warranty please contact your local supplier.

PRODUCT DISPOSAL



In case the product is to be disposed of, the relevant legal regulations are to be followed.





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