



Water Bath

LMSW-A100

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1. Safety Measures

Electrical Safety Instructions:

This equipment is operated on 220V/AC. A rubber 3-strand main cord is provided, of which the black one is for grounding. One of the terminals of the cord is connected to the floorboard of the outer casing, while the other terminal is connected to the longest and thickest pin in the 3-pin plug. When in operation, the ground wire for the 3-pin receptacle must be connected effectively. Generally, the ground wire is welded to the water pipe or a galvanized tube of 2m long and 25mm, in diameter to be buried underground.

Note: Do not connect to the gas pipe!

2. Introduction

Water Bath LMSW-A100 provides capacity up to 6.8 L for simultaneous heating experimental procedure. It functions within a temperature range from RT to 99.9°C, maintaining stability at $\pm 0.5^\circ\text{C}$. Equipped with a programmable timer, allowing durations from 1 to 999 minutes for controlled processing. Built with superior grade materials for enhanced durability and long-term performance. Our Water Bath incorporates an optimized chamber, providing ample space to accommodate various sample containers.

3. Features

- Dual Openings
- Safety Alarm Indicator
- Efficient Power Consumption
- Intuitive Control Panel
- Chemical-Resistant Interior
- Compact Configuration

4. Specifications

Model No.	LMSW-A100
Capacity	6.8L
No. Of Openings	2
Temperature Range	RT to 99.9°C
Temperature Fluctuation	$\pm 0.5^\circ\text{C}$
Resolution	0.1
Timer	1 to 999min
Over-Temperature Alarm	Yes
Opening Diameter	120 mm
Height	110 mm
Power Consumption	500 W
Power Supply	220V, 50Hz
Working Area Dimension	305 × 160 × 140 mm

5. Applications

Water Bath LMSW-A100 is vital for sample heating, serum preparation, and controlled-temperature experiments in clinical and medical laboratories while aids in incubation, enzyme reactions for microbiology and life sciences research.

6. Instrument Introduction

This equipment is of water bath type. Its diameter of the maximum opening is 125mm, each opening is provided with 4 rings and 1 cover. The inner bath is of one-piece sheet copper molded by punching. The outer casing is made of choice sheet steel of high quality to be finished in spray lacquer. The gap between the outer casing and the inner bath is stuffed with glass wool for heat preservation. The heating element is immersed in water so that rapid heating can be obtained and power consumption economized. A metal regulator is also equipped for adjusting the temperature from 37°C to 100°C according to requirements.

Note: These are for the adjuster's reference only.

7. Operations

7.1 Set Temperature

Press the **SET** key to set the temperature. After pressing the **SET** key, data on the lower line digital tube will flash (the upper low measure temperature normally), which means the meter enters the status of the temperature setting. Press Δ the key to increase the set value, and press ∇ a key to decrease the set value. If continuously press the increase key or decrease key, the set value will change rapidly. Press the **SET** key again, and the meter returns to temperature under normal working status. The setting is finished.

7.2 Parameter Setting

Press the **SET** key for 3 seconds to enter the setting status of the internal menu. The following parameters appear one by one.

- 1) **E**: Offset of proportion zone, parameter E can move the actual control point. Even though the center of time proportion moves, value E can be positive or negative depending on the heating system.
- 2) **P**: Proportion zone, that is, proportion control value. For easy understanding and for the proportion zone to have a bigger representation space, the proportion zone of this meter is unilateral, that is, the actual proportion zone is twice the value P. With the actual control point as the center, output heating proportion within the range of value P from down to up is evenly distributed at 0% - 100%.
- 3) **T**: Heating output circulation period, that is the working circulation period of the relay. Value T is small, and the control effect is good, but if value T is too small, the relay's lifetime will shorten due to frequent working. Generally, value T is 20-40s.

For example: If P is set to 4.0 (actual proportion zone is 8.0), temperature is set to 60.0°C, E is set to 2.0, and the actual control point is 58.0°C. When the temperature reaches 54.0°C, the meter will enter a status of proportion zone control.

7.3 Correction of error

When confirming that the displayed value on the meter is not the correct measured value, correct displayed value. Press the **SET** key for 3 seconds to enter the internal menu of the meter, and the first parameter that appears is E, press the **SET** key, meter data will flash, this flashing parameter is the correcting parameter of error, and press Δ or ∇ key to correct this parameter. The correction range of error is -9.9°C~+9.9°C. Press the **SET** key again and parameters P, and T will appear one by one, and then press the **SET** key again to exit. Correction value of meter when ex-work is 0. When using, one shall prevent the correct meter from being corrected incorrectly.



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