

LED Digital 7" Square Hotplate Stirrer

User Manual



MS7-S

Classic 7" Square Plate Stirrer

MS7-H550-S

LED Digital 7" Square Hotplate Stirrer

Please read the User Manual carefully before use, and follow all operating and safety instructions!

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Preface

Welcome to the “LED Digital 7” Square Hotplate Stirrer”. Users should read this Manual carefully, follow the instructions and procedures, and be aware of all the cautions when using this instrument.

Service

When help needed, you can always contact the Service Department of manufacturer for technical support in the following ways:

SCIOGEX, LLC
500 Four Rod Road
Suite 122
Berlin, CT 06037
USA

Tel: 1- (860) 828-5614

Fax: 1- (860) 828-5389

E-mail: info@scilogex.com

Website: [Http://www.scilogex.com](http://www.scilogex.com)

Please provide the customer care representative with the following information:

- Serial number (on the rear panel)
- Certification
- Description of problem (i.e., hardware or software)
- Methods and procedures adopted to resolve the problems
- Your contact information

Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 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. You may also send the instrument directly to manufacturer, enclosing the invoice copy and by giving reasons for the claim.

1. Safety Instructions



Warning!

- Read the operating instructions carefully before use.
- Ensure that only trained staff works with the instrument.



Risk of burn!

- Caution when touch the housing parts and the hotplate which can reach temperature of 550 °C.
- Pay attention to the residual heat after switching off.



Protective ground contact!

- Make sure that socket must be grounded (protective ground contact) before use.
- When working wear personal safety guards to avoid the risk from:
 - Splashing and evaporation of liquids
 - Release of toxic or combustible gases
- Set up the instrument in a spacious are on a stable, clean, non-slip, dry and fireproof surface. Do not operate the instrument in explosive atmospheres, with hazardous

substances or under water.

- Gradually increase the speed, reduce the speed if:
 - Stirring bar breaks away due to high speed
 - The instrument is not running smoothly, or container moves on the base plate
- Temperature must always be set to 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 described in the “Accessories” chapter. Accessories must be securely attached to the device and can not come off by themselves. Always disconnect the plug before fitting accessories.
- When the external temperature sensor needed, the tip of the measuring sensor must be at least 5-10mm from vessel bottom and wall.

- 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 hotplate. Do not cover the device.
- Forbid to put pressure and over heat media on the surface of glass ceramic, that can be caused surface broken.
- The instrument may only be opened by experts.
- Keep away from high magnetic field.

2. Proper use

The instrument is designed for mixing and/or 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)

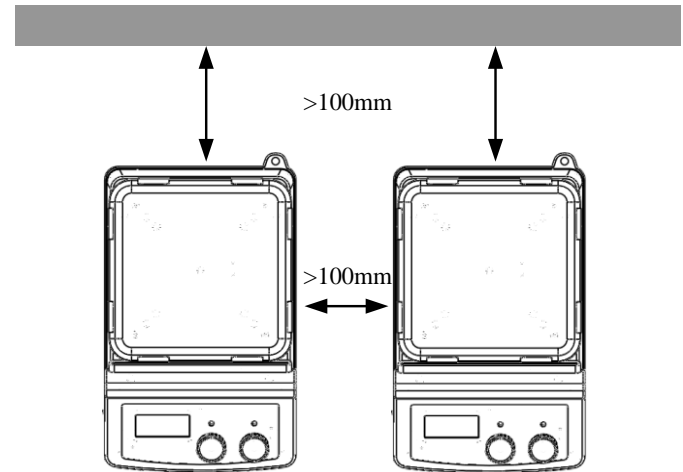


Figure 1

This device is not suitable for using in residential areas or other constraints mentioned in Chapter 1.

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
Main unit	1
Power cable	1
User Manual	1

Table 1

4. Control

4.1 Control elements

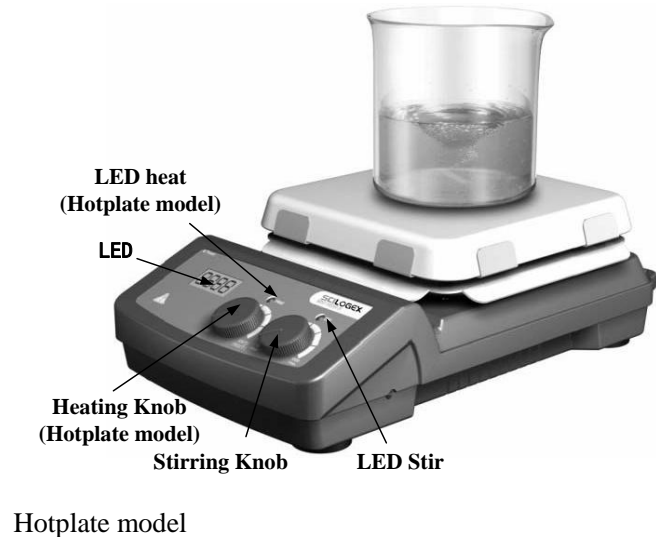


Figure 2

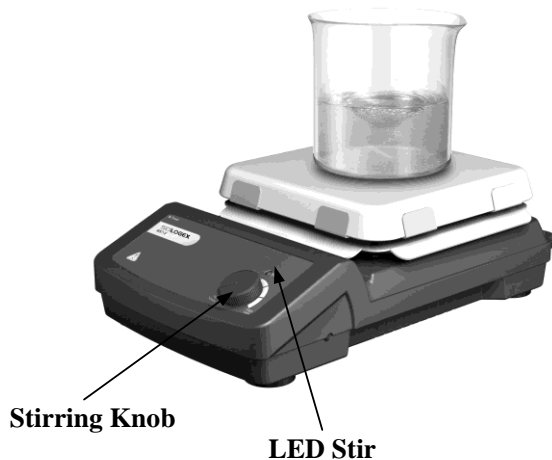


Figure 3

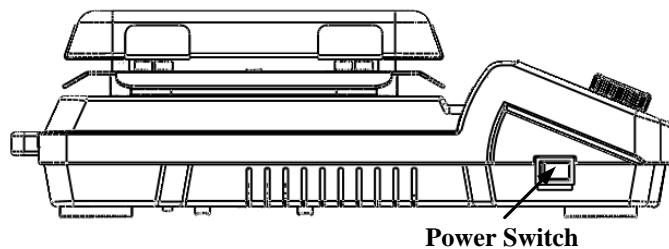


Figure 4

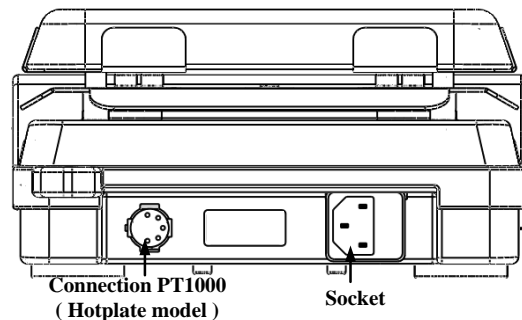


Figure 5

Items	Descriptions
Speed control Knob Stir	The stirring function is switched ON or OFF by rotating the knob.
Temperature control knob Heat (Hotplate)	The heating function is switched ON or OFF by rotating the knob.
LED (Hotplate)	If rotate the heating knob, LED displays the temperature setting value and shift to real value in the duration of 5 seconds.
LED Heat (Hotplate)	When the heating function is switched ON, the LED Heat flash.

LED Stir	When the instrument is switched ON, the LED Stir is lit.
Power Switch	Switch ON or OFF the instrument.

Table 2

4.2 Display (Hotplate Model)



Figure 6

Display	Descriptions
Display area	When the heating function is switched ON and rotate the stirring knob, LED displays the temperature setting value and shifts to real value in 5 seconds.
	When the heating function is switched OFF and the hotplate temperature is still above 50°C, LED displays Hot, otherwise LED displays 0.

5. Trial run

- Make sure the required operating voltage and power supply voltage match.
 - Ensure the socket must be properly grounded.
 - Plug in the power cable, ensure the power is on and begin initializing.
 - Add the medium into the vessel with an appropriate stirring bar.
 - Place vessel on the work plate.
 - Clockwise rotate the stirring knob slowly to set the rated rotary speed in the safe speed range from 0 to 1500rpm, and start stirring function.
 - Clockwise rotate the heating knob slowly to set the rated temperature in the safe range from room temperature to 550°C, and start heating function (hotplate model).
 - Begin the heating and stirring functions.
- If these operations above are normal, the device is ready to operate. If these operations are not normal, the device may be damaged during transportation, please contact manufacturer/supplier for technical support.



Warning !

Forbid to transfer the vessel when the instrument working.

6. Working with external temperature sensor (Hotplate Model)

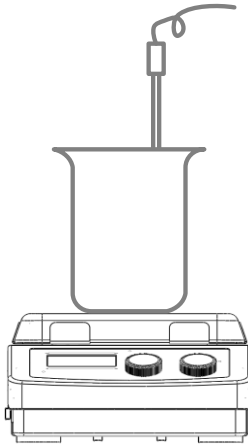


Figure 7

The external temperature sensor PT1000 is the Manufacture's standard accessory. If the sensor is plugged in and rotate the heating knob, LED displays the

temperature setting value and shifts to real value in 5 seconds. Safe circuit controls hotplate temperature. Comparing with the temperature control of the hotplate, the external temperature sensor can control the medium's temperature more precisely.

If external temperature sensors needed, it must be plugged in before the device is switched ON. Ensure the external temperature sensors connecting firmly and to be inserted in the media before heating. The heating function will be stopped automatically under abnormal conditions. Please operate follow the instructions below:

- Switch OFF the instrument.
- Ensure the external temperature sensors is inserted in the media heated.
- Switch ON the instrument and run heating function.

If the heating function did not work, please contact manufacturer/supplier for technical support.



Warning !

Forbid to plug in/pull out external temperature sensor in heating.

7. Faults

- Instruments can not be power ON.
 - Check whether the power cable is plugged in.
 - Check whether the fuse is broken or loose.

If these faults are not resolved, please contact manufacturer/supplier.

8. 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

- Wear the proper protective gloves during cleaning of

the instrument.

- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method will not harm the instrument.
- Send in the case of service the instrument back in the packaging carton. Storage packing is not sufficient for the back dispatch. Use additionally a suitable transportation packing.
- The enamel makes the hotplate easier to care for and more resistant to acids and bases. Because of it, however, the hotplate is also more susceptible to extreme fluctuations in temperature and the force of impact. This can result in cracks forming or the coating flaking off.



Warning!

Cut off power when maintenance and cleaning.

9. 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

10. Technical data

Voltage [VAC]	100-120/200-240
Frequency [Hz]	50/60
Power [W]	*1030 30
Stirring point position quantity	1
Max. stirring quantity (H ₂ O) [l]	10
Max. magnetic bar [L×Ø, mm]	80×10
Motor type	Shaded pole Motor
Max. power input of motor [W]	15
Max. power output of motor [W]	1.5
Speed range [rpm]	0-1500
Rotary speed display	Scale
Plate material	Glass ceramic
Dimensions of workplate (mm)	184×184
*Heating power [W]	1000
*Temperature range [°C]	RT-550
*Temperature display [°C]	LED
*Temperature display accuracy [°C]	± 1

*The safety temperature of the hotplate [°C]	580
*Temperature sensor in medium	PT1000
*Control accuracy of heating temperature with temperature sensor [°C]	±0.5
*Residual heat warning	50°C
Dimensions (mm)	215×360×112
Weight [kg]	*4.5 3.8
Permitted ambient temperature [°C]	5-40
Permitted relative humidity	80%
Protection class acc. to DIN 60529	IP21

*Hotplate model

Table 3

11. Ordering information

Cat No.	Descriptions
813221009999	MS7-H550-S LED Digital 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, USA plug, 110V/50Hz/60Hz
813221019999	MS7-H550-S LED Digital 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, Cn plug, 220V/50Hz/60Hz
813221029999	MS7-H550-S LED Digital 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, Euro plug, 220V/50Hz/60Hz
813221039999	MS7-H550-S LED Digital 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, UK plug, 220V/50Hz/60Hz
813211009999	MS7-S Classic 7" Square Plate Magnetic Stirrer, glass ceramics plate, USA plug, 110V/50Hz/60Hz
813211019999	MS7-S Classic 7" Square Plate Magnetic Stirrer, glass ceramics plate, Cn plug, 220V/50Hz/60Hz
813211029999	MS7-S Classic 7" Square Plate Magnetic Stirrer, glass ceramics plate,

LED Digital 7" Square Hotplate Stirrer

Cat No.	Descriptions	Cat No.	Descriptions
	Euro plug, 220V/50Hz/60Hz		reaction vessel, Ø17.75mm, 26mm depth
813211039999	MS7-S Classic 7" Square Plate Magnetic Stirrer, glass ceramics plate, UK plug, 220V/50Hz/60Hz	18900049	MS135.7 Golden quarter pie, 4 holes, 16ml reaction vessel, Ø21.6mm, 31.7mm depth
Accessories			
18900016	PT1000 Temperature sensor for digital hotplate model, used for Pro, MS7-H550-Pro & MS7-H550-S, 230mm		
18900084	PT1000 Temperature sensor for digital hotplate model, used for Pro, MS7-H550-Pro & MS7-H550-S, 100mm		
18900017	Support clamp of PT1000		
18900002	MS135.2 Red quarter pie, 11 holes, 4 ml reaction vessel, Ø15.2mm, 20mm depth		
18900003	MS135.3 Purple quarter pie, 4 holes, 20 ml reaction vessel, Ø28mm, 24mm depth		
18900004	MS135.4 Blue quarter pie, 4 holes, 30 ml reaction vessel, Ø28mm, 30mm depth		
18900005	MS135.5 Black quarter pie, 4 holes, 40 ml reaction vessel, Ø28mm, 43mm depth		
18900048	MS135.6 Green quarter pie, 6 holes, 8ml		

Table 4

SCIOGEX, LLC

500 Four Rod Road

Suite 122

Berlin, CT 06037

USA

Tel: 1-860-828-5289

Fax: 1-860-828-5389

E-mail: info@dragonlabusa.com

Website: [Http://www.scilogex.com](http://www.scilogex.com)