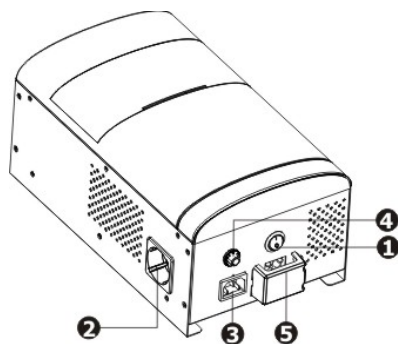


## 1. Introduction

HEAT MASTER is exclusively designed for electronically controlled boilers and home heaters that contains electronic control circuitry and electric water pump. Featuring with dynamic voltage regulator, this device can ensure stable power to connected loads as utility. Equipped with LCD digital display, it provides real-time system vitals to users. The built-in DC start function enables the HEAT MASTER to be started up without a supply of AC power. The main features of this HEAT MASTER are listed below:

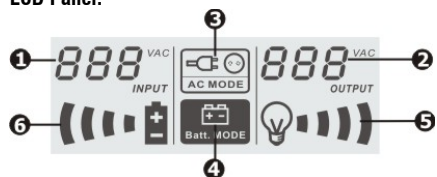
- Microprocessor control guarantees high reliability
- Built-in enhanced boost & buck AVR
- Fast charger
- Green power function for energy saving
- Auto restart during AC recovery
- Comprehensive LCD display
- External battery connection available for long-term operation

## 2. Product Overview



- 1 Power switch
- 2 Output receptacles
- 3 AC input
- 4 Circuit breaker
- 5 External battery connector

### LCD Panel:



- |                     |  |
|---------------------|--|
| 1 Input voltage     | 4 Battery mode indicator                                     |
| 2 Output voltage    | 5 Load level indicator, flashing indicates overload          |
| 3 AC mode indicator | 6 Battery capacity indicator, flashing indicates low battery |

## 3. Important Safety Warning (SAVE THESE INSTRUCTIONS)

**CAUTION!** To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (See the specifications for the acceptable temperature and humidity range.) To reduce the risk of overheating the HEAT MASTER, do not cover the HEAT MASTER cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces. Do not allow liquids or any foreign object to enter the HEAT MASTER. Do not place beverages or any other liquid-containing vessels on or near the unit.

**CAUTION!** Do not plug the HEAT MASTER input into its own output. Connection to any other type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazard.

**CAUTION!** In the event of an emergency, press the "OFF" button and disconnect the power cord from the AC power supply to properly disable the HEAT MASTER.

**Attention** hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the HEAT MASTER is necessary.

**CAUTION!** Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

**CAUTION!** Internal battery voltage is 12VDC. Its technology is sealed, free-maintenance, lead-acid battery.

**CAUTION!** Do not dispose of batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes.

**CAUTION!** Unplug the HEAT MASTER prior to cleaning and do not use liquid or spray detergent. It does not require internal cleaning.

## 4. Installation and Initial Startup

### Placement Conditions

Install the HEAT MASTER in a protected area that is free of excessive dust and has adequate air flow. Do not place the HEAT MASTER below other equipment can drop water over it. Do NOT operate the HEAT MASTER where the temperature and humidity is outside the specific limits. (Please check the specs for the limitations.)

### Wall Mount the Unit

The unit can be mounted to a wall surface.

1. Refer to Chart 1 to mark 6 black dot on the wall.
2. Use a sharp nail to puncture the center of each black dot.
3. Mount the unit by positioning the key-hole slots over the mounting nails. (see chart 2)

### Connect to Utility and Charging

Plug in AC input cord to the wall outlet. The unit charges its battery while connecting to the utility.

### Connect the Loads

Simply plug in the motor-typed load to output receptacles on the side of the HEAT MASTER. Simply turn on the power switch of HEAT MASTER unit. Then, the device connected to the HEAT MASTER will be protected by HEAT MASTER unit.

### Turn On/Off the Unit

Turn on the HEAT MASTER unit by pressing the power switch. Turn off the HEAT MASTER unit by pressing again the power switch.

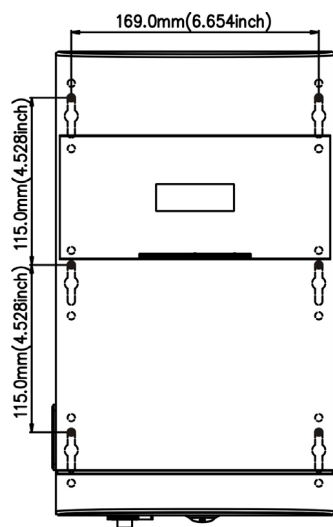


Chart 1

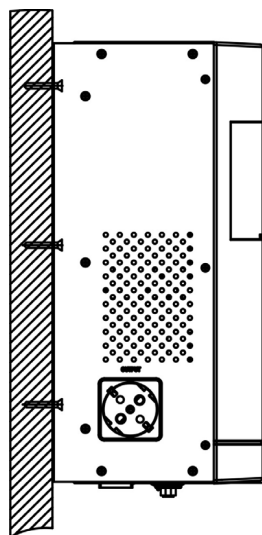


Chart 2

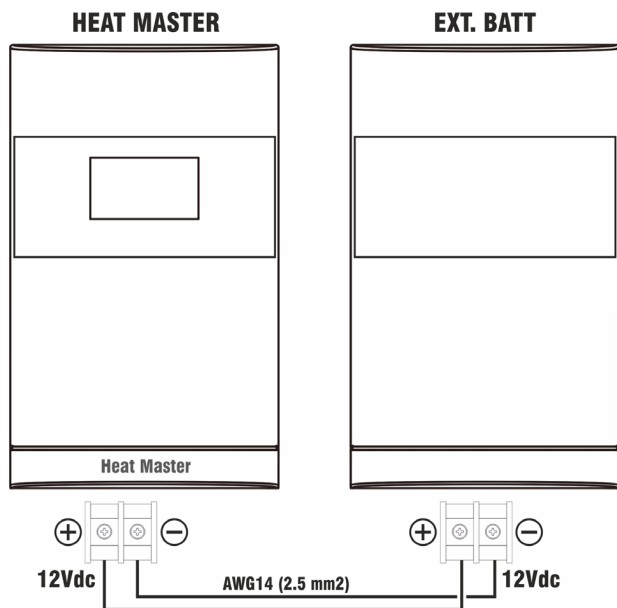
### Connect to External Battery Bank

If additional runtime is required connect Heat Master to external battery pack.



**WARNING!!!!:** Battery connection does not accept reverse polarity.

- Left terminal (+) in Heat Master must be connected to left terminal (+) in Ext. Battery
- Right terminal (-) in Heat Master must be connected to right terminal (-) in Ext. Battery



## 5. Trouble Shooting

Problem	Possible Cause	Solutions
HEAT MASTER cannot be turned on after pressing the power switch.	Low battery.	Charge at least 4-6 hours.
	Battery defect.	Replace the battery with the same type
LCD flashes and alarm beeps continuously when utility power is normal.	The HEAT MASTER is overload.	Remove some loads first. Before reconnecting equipment, please verify that the load matches capacity specified in the specs.
	Circuit breaker trip.	Reset the breaker.
	Battery defect.	Replace the battery with the same type of battery.
When power fails, back-up time is shorten.	It is overload.	Remove some critical load.
	Battery voltage is too low.	Charge it at least 4-6 hours.
	Battery defect. It might be due to high temperature operation environment, or improper operation to battery.	Replace the battery with the same type of battery.
The mains is normal but it is battery mode.	Power cord is loose.	Reconnect the power cord properly.

## 6. Specifications

HEAT MASTER			
Rated Output Capacity / Capacidad Nominal	250 VA / 200 W		
Peak Capacity / Capacidad Pico	800 VA / 640 W (< 6 s)		
Input - Entrada			
Voltage / Voltaje - Frequency / Frecuencia	230V (162-268 Vac) - 50Hz		
Output - Salida			
Voltage / Voltaje - Frequency / Frecuencia	230V (+/- 10%) - 50Hz		
Auto-restart / Auto-arranque	Yes / Si		
Internal Batteries - Baterías Internas			
Type / Tipo	Maintenance Free VRLA-AGM / Sellada Sin Mantenimiento		
Backup Time / Autonomía (*)	Heater Mode:	Domestic hot water "ON" (80W)	Central heating circuit "ON" (120W)
		Heat Master:	75min
		Heat Master + 1 EXBATT:	180min
Recharge Time / Tiempo de Recarga	4-6 hours to 90% capacity / 4-6 Horas hasta 90%		
Protections / Protecciones			
Overloads / Sobre-Cargas	Circuit Breaker with Manual Reset / Disyuntor Rearmable		
Surge/Spikes Protection / Protección contra Picos	MOV protection L-N / Protección MOV entre L-N		
Product Features / Características del Producto			
Power Outlets / Tomas	1 x FRENCH or 1 x SCHUKO (CEE 7/4)		
Product Size-Weight / Dimensiones-Peso Producto	319 x 190 x 150 - (9 Kg)		
Operating / Condiciones de Operación	< 95% RH (non condensing) / < 40 dB / 0-40°C		

Technical specs can be modified to comply with special project requirements / Las especificaciones se pueden ajustar para proyectos.

Specifications may change without further notice / Las especificaciones pueden cambiar sin previo aviso.

(\*) Backup tests based on gas boiler: "ROCA SARA 24/24" dual domestic hot water & central heating functions (20.700Kcal/h ; 24KW max.)

(\*) Autonomía con una caldera ROCA SARA 24/24 en modo de agua caliente y calefacción central (20.700Kcal/h ; 24KW max.)