technogamma

SineUPS

Models S400, S600, S850 and S1200



User manual

Introduction

SineUPS is an uninterruptible power supply, guaranteeing constant powering to the electric loads connected. In case of mains failure (power cut or instability) SineUPS generates pure sine wave and can work continuously until the battery runs out. The output voltage has the same form as the mains voltage meaning that the connected loads will work just as efficiently as being powered from the mains network.

When the device is powered by regular mains voltage, it keeps the battery fully charged so it can provide its maximum capacity when needed.

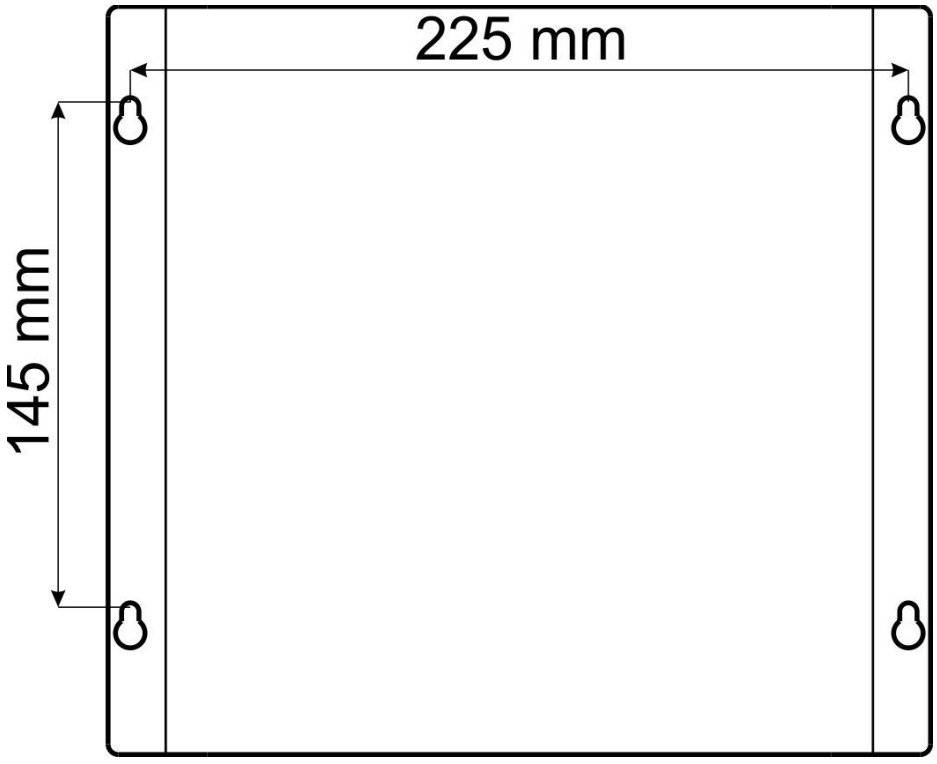
Installation

Warning!

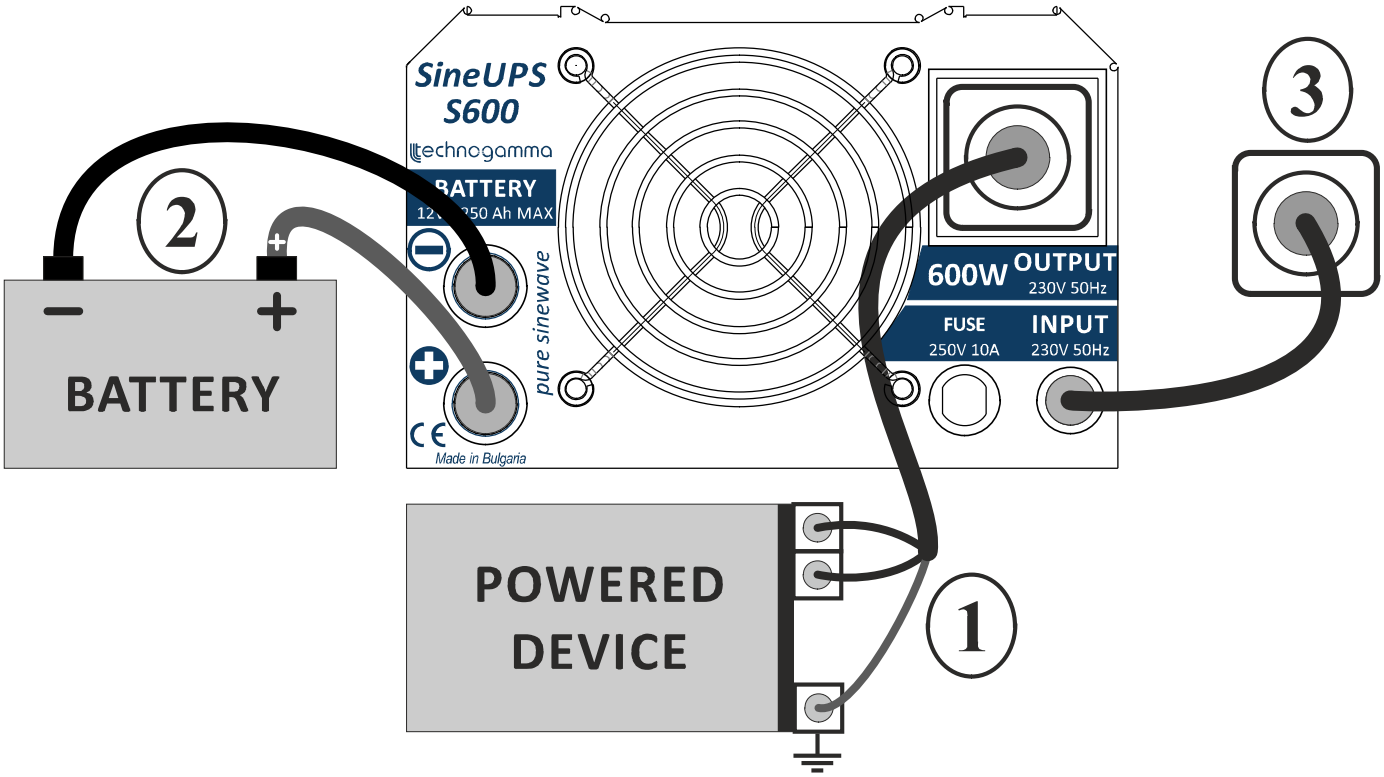
- ***SineUPS works at high voltage and requires special attention when its being connected!***
- ***The device is designed for home use only! Please make sure there is enough space around it to vent properly, do not install it in a place exceeding the operating temperature and humidity!***

Mounting

The device can be mounted on a horizontal surface or vertically on a wall. In order to mount it vertically, install 4 screws on the wall (3.5 x 35 mm), so the unit can be hanged as depicted on the drawing below.



Connection



1. Connect the load's power plug to the *OUTPUT* socket of the UPS.

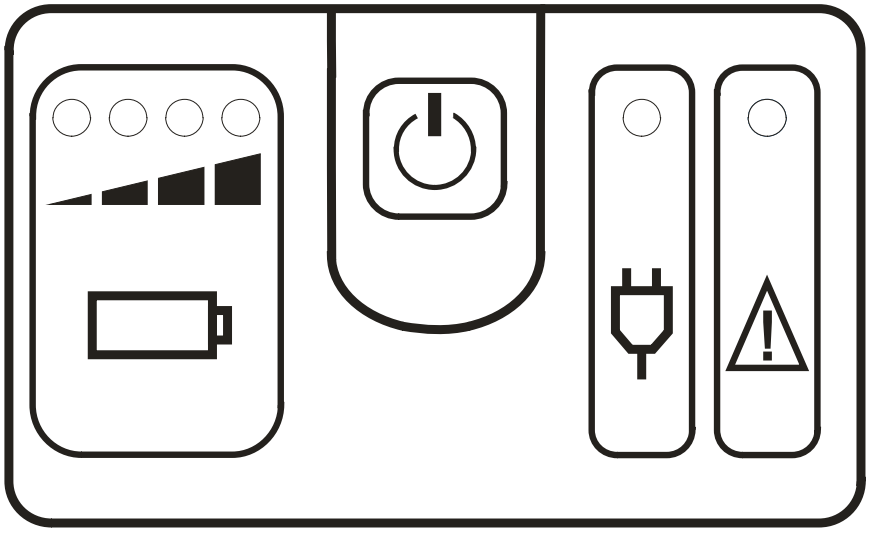
2. Connect the battery to the *BATTERY* terminal, paying attention to the polarity – the **+** cable goes to the **+** terminal of the battery. Depending on the particular type of installed battery, there is possibility that some harmful gases can be released and in that case it is recommended to install the device in a proper location.

- ***Model S1200 operates using 24V battery! You can connect two 12V batteries, in series, as they have to be of equal capacity and in similar condition and type!***

3. Verify that the load and battery are properly connected. Plug the power plug of the UPS (*INPUT* terminal) to mains socket. If mains is present, the device will start charging the battery. If in the electrical installation a common neutral is used instead of protective earth (PE), it is recommended to cut off the plug and power the device using hard wiring – brown wire to phase and blue to neutral.

4. Turn on the device to power the load connected by pressing the power on button (see next chapter *Operation*).

Operation



Symbol	Function	Description
	Power On / Off button	Press and hold the button for 0.5 sec to turn the device on or off.
	On	Device is turned on.
	Battery	4 levels of battery charge, each LED stands for 25% charge.
	Mains power	Stable mains. The LED blinks if the mains voltage is not within the limits.
	Error	An error occurred: overload, overheat or internal error.

Press and hold the power button  for 0.5 sec to power the device and load connected. The button LED lights on and a beeping sound is made.

Stable mains

Whenever stable mains is present, the device charges the battery and displays the current charge on the panel.

If the device is turned on and the mains is off or unstable, it automatically switches to battery powered mode.

If the mains is not available, the ⏚ indicator goes off, if the mains voltage is not within the specified limits the indicator blinks.

Battery power

Switching to battery powered mode a continuous sound is made in the time of transition and then a short one every 30 sec.

The time to operate on battery power depends on the capacity, charge and condition of the connected battery, as well as the power of the load connected. When the battery charge goes below 10%, the device beeps every 2 sec until the battery voltage goes below 10.2 V (20.4 V for S1200 model), then the device automatically shuts down. When the mains is restored, the device automatically turns on and starts charging the battery.

In case of connecting a load that is more powerful than the device rated output power or short-circuit of the output, the ⚠ LED lights up and the power to the load is cut off. The UPS will attempt 10 retries in 10 sec to restore the power to the load and if the overload condition is removed will go back to normal battery power operation.

Troubleshooting

Problem	Solution
The device is connected to mains, but pressing the button  does not turn it on.	***The device does not function without a connected battery!*** ◆ If you are using a car battery, please check the mounted terminals – some of them are painted on the inner side and do not ensure proper electrical contact to the battery contacts. ◆ The battery should be in good condition. If the voltage of the connected battery is under 10.5V (21.0V for S1200 model), then the device will not turn on /low voltage battery protection/.
The LED  does not indicate the presence of mains.	Check the device connections and mains voltage. Check the device fuse and replace it if necessary.
The device makes long beep and turns itself of during power up.	Device internal error. Please contact the authorized service center.
The LED  is on and beeps every 30 sec.	Normal work in battery powered mode, the device is turned on and the mains is missing.

Technical parameters

	Parameter	S400	S600	S850	S1200
Input	Voltage	220 VAC			
	Frequency	50 Hz			
	Voltage to switch to battery powered mode	below 180 VAC over 260 VAC			
	Protection	Fuse, mounted on the housing			
Output	Voltage	220 VAC ± 4%			
	Frequency	50 Hz ± 1 Hz			
	Power	**400 W**	**600 W**	**850 W**	**1200 W**
	Voltage form	Pure sine wave			
	Switching time	< 5ms			
	Protection	Automatic resettable protection from overload and short circuit			
Battery	Type	Lead-acid			
	Voltage	12 V			24 V
	Capacity	External* 20 – 150 Ah	External* 40 – 250 Ah	External* 60 – 350 Ah	External* 40 – 250 Ah
	Protection	Reverse polarity connection protection			
	Weight	6.2 kg	6.9 kg	7.9 kg	8.1 kg
	Dimensions	255 x 215 x 130 mm			
	Ambient temperature	0 – 35 °C			
	Relative humidity	0 – 95 %			

* External battery is not part of the product.