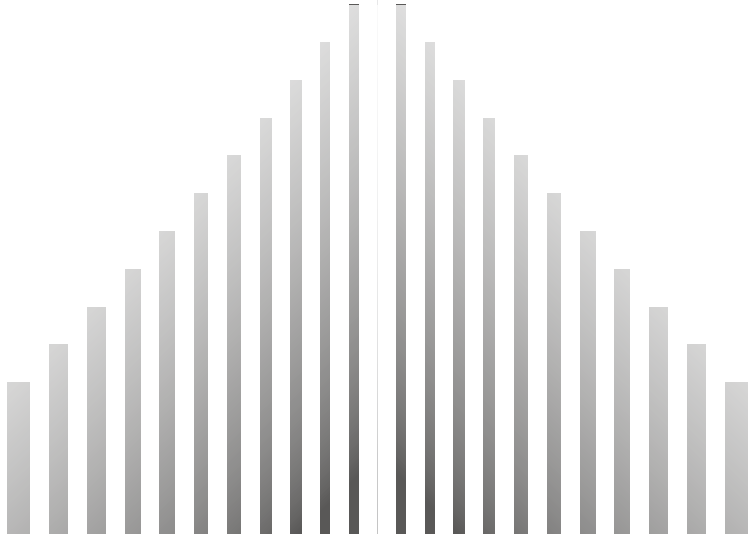
INVGU

User's Manual

Uninterruptible Power System



V:4257-2146

SAFETY-WARNING

- ★ The voltages inside UPS may be hazardous. Do not attempt to disassemble the unit. The unit contains no user serviceable parts. Only factory service personnel may perform repairs.
- ★ Internal battery voltage is 12Vdc. Sealed, lead-acid,6 cells battery.
- ★ Connection to any other type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazard as well as violating to local electrical codes.
- ★ In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.
- ★ Do not allow liquids or any external objects to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- ★ This unit is designed for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations where there is static or flowing water, or excessive humidity.
- ★ Do not plug the UPS input into its own output.
- ★ Do not attach a power strip or surge suppressor to the UPS.
- ★ Do not connect non-computer – related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.
- ★ To reduce the risk of overheating the UPS, sufficient heat dissipation space should be reserved when UPS is working. Do not cover the UPS cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as air heaters or furnaces.
- ★ Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- ★ Do not dispose the batteries into fire as they may explode.
- ★ Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- ★ A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:
  (1) Remove watches, rings, or other metal objects from the hands.
  (2) Use tools with insulated handles.
  (3) Wear rubber gloves and boots.
  (4) Do not lay tools or metal parts on top of batteries.
  (5)Disconnect charging source prior to connecting or disconnecting batteries terminals.
- ★ Servicing of batteries should be performed or supervised by technical and authorized personnel only.
- ★ When replacing batteries, replace with the same number and type of sealed lead - acid battery. The maximum ambient temperature rating is 40℃。
- ★ During the installation of this equipment is should be assured that the sum of the leakage currents of the UPS and the connected loads does not exceed 3.5mA.
- ★ Beware of possibility of electric shock when disconnecting of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected from the plus and minus terminals of the battery when maintenance or service work inside the UPS is necessary.

SPECIFICATION

CAPACITY	VA	800VA	1500VA
INPUT	Voltage	230VAC	
	Voltage Range	140-300VAC	
OUTPUT	Voltage Regulation (Batt. Mode)	+/-10%	
	Frequency	50Hz or 60Hz	
	Frequency Regulation (Batt. Mode)	+/-1Hz	
	Output Waveform	Simulated Sine Wave	
BATTERY	Battery Type	12VDC	24VDC
	Recharge Time	6-8 hours to 90% after complete discharge	
TRANSFER TIME	Typical	4-8 ms	
INDICATOR	AC Mode	Green LED lighting	
	Battery Mode	Yellow LED Flashing	
	Fault Mode	Red LED Lighting	
AUDIBLE ALARM	Backup Mode	Sounding every 10 seconds	
	Low Battery	Sounding every 1 second	
	Overload	Sounding every 0.5 second	
	Fault	Continuously sounding	
PROTECTION	Full Protection	Discharge, overcharge, and overload protection	
PHYSICAL	Dimension (mm), LXWXH	298x101x142	390x125x225
ENVIRONMENT	Operating Environment	0-90% RH @ 0-40℃（non-condensing）	
	Noise Level	Less than 45dB	

3. Storage

Before storing, charge the UPS 5 hours. Store the UPS covered and upright in a cool, dry location. During storage, recharge the battery in accordance with the following table:

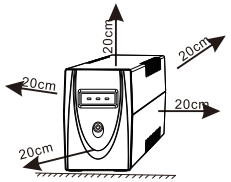
Storage Temperature	Recharge Frequency	Charging Duration
-25°C - 40°C	Every 3 months	1-2 hours
40°C - 45°C	Every 2 months	1-2 hours

4. Placement

Install the UPS unit in any protected environment that provides adequate airflow around the unit, and is free from excessive dust, corrosive fumes and conductive contaminants. Do not operate your UPS in an environment where the ambient temperature or humidity is high.

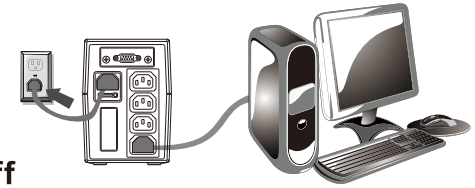


In addition, at least 20cm space should be reserved around the UPS (including the top) to avoid interference with surrounding devices and ensure the heat dissipation.



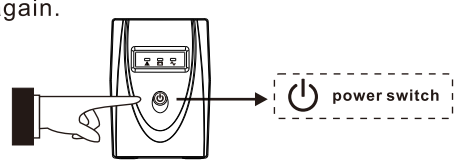
5. Connection

Plug the UPS into a 2-pole, 3-wire grounded receptacle. Then connect one computer-related device into each of the power receptacles supplied on the back of the UPS.



6. Turn On/Off

To turn on the UPS unit , press the power switch lightly. To turn off the UPS unit, press the power switch again.



7. DC Start

All Series are equipped with DC Start. To start the UPS when AC utility power is not available, simply press the power switch.

★ Contact the nearest hazardous waste disposal station when the products or components are discarded.

INTRODUCTION

This UPS is specially designed for personal computer with multi-functions. Its light weight, compact design perfect fits to the limited working environment. The line of UPS is equipped with boost and buck AVR to stabilize input voltage range. It is also built-in with DC start function. This function enables the UPS to be started up without AC power supplied. Although it's small UPS, The main features of UPS are listed below:

- Microprocessor control guarantees high reliability.
- Equipped with boost and buck AVR.
- DC start function.
- Auto restart while AC recovery.
- Compact size, light Weight.
- Provides AC overload protection.

TROUBLE SHOOTING

Symptom	Possible Cause	Proposed action
No LCD lighting (for LCD model), or no LED display(for LED model) on the front panel.	1. Battery weak.	1.Charge battery up to 8 hours.
	2. Battery defect.	2. Replace with the same type of battery.
	3. Power switch is not pressed.	3. Press the power switch again.
Alarm buzzer beeps continuously when AC supply is normal.	Overload of the UPS.	Verify that the load matches the UPS capability specified in the specs.
When power failure, back-up time is shorten.	1.Overload of the UPS.	1.Remove some non-critical load.
	2. Battery voltage is too low.	2.Charge battery 8 hours or more.
	3.Battery defect due to high temperature operation environment, or improper operation to battery.	3.Replace with the same type of battery.
Mains normal but Battery Mode indicator lights(for LCD model), or Yellow LED is flashing(for LED model)	Power cord is loose.	Reconnect the power cord properly.

If any abnormal situations occur that are not listed above, please call service people immediately.

SYSTEM DESCRIPTION

Front panel:

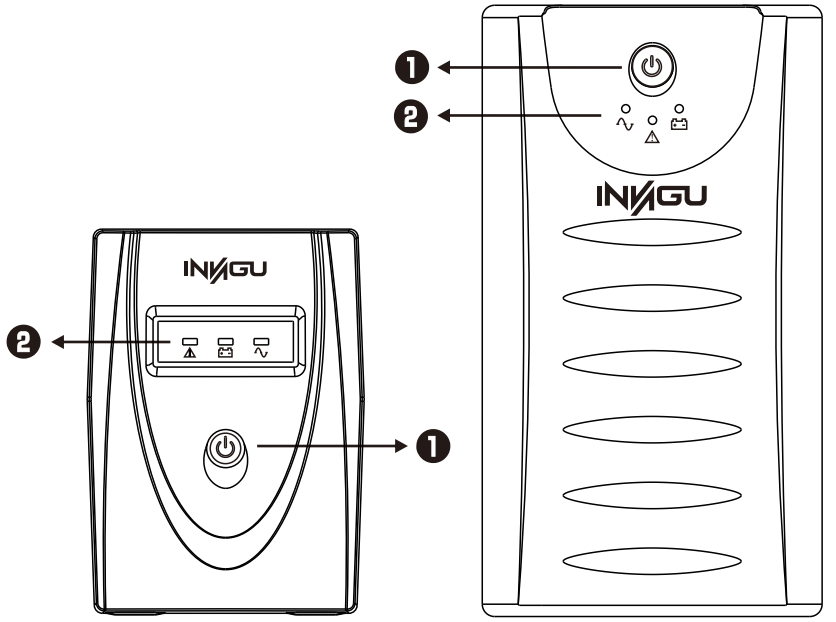
1.Power Switch

2.LED Indicators-

AC Mode: Green LED lighting

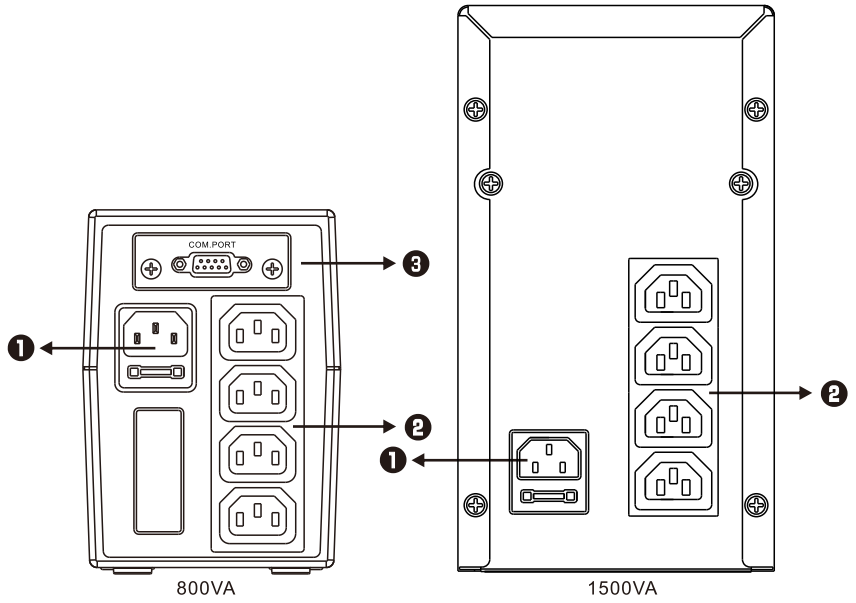
Battery Mode: Yellow LED flashing

Fault Mode: Red LED lighting



Back Panel :

1.AC input
2.Output receptacles
3.RS232(optional)



1. Inspection

Remove the UPS from its packaging and inspect it for damage that may have occurred during shipping. If any damage is discovered, repack the unit and return it to the place of purchase.

2. Charging

This unit is shipped from the factory with its internal battery fully charged, however, some charge may be lost during shipping and the battery should be recharged prior to use. Turn on the UPS, plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at lease 6 hours with no load (no electrical devices such as computers, monitors, etc.) connected.



