

Liebert PSA itON UPS

User Manual

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Contents

Safety Instructions

1.	Product Introduction	5
2.	System Description	6
3.	Installation	7-9
4.	Software	10
5.	Troubleshooting	11
6.	Technical data	12



Safety Instructions

As dangerous voltages are present within the UPS, only an Emerson technician or an Emerson-authorized technician is permitted to open it. Failure to observe this could result in electric shock risk and invalidation of any implied warranty

Transport

- Please transport the UPS system only in the original packaging (to protect against shock and impact).

Set-up

- Condensation may occur if the UPS system is moved directly from a cold to a warm environment. The UPS system must be absolutely dry before being installed. Please allow an acclimatization time of at least two hours.
- Do not install the UPS system near water or in damp environments.
- Do not install the UPS system where it would be exposed to direct sunlight or near heat source.
- Do not block off ventilation openings in the UPS system's housing.

Installation

This manual contains information concerning the installation and operation of the Emerson Network Power Liebert PSA itON Uninterruptible Power System (UPS)

All relevant parts of the manual should be read prior to commencing the installation.

- Do not connect appliances or equipment (e.g. laser printer) to the output socket, which would overload the UPS system.
- Place cables in such a way that no one can step on or trip over them.
- Do not connect domestic appliances such as hair dryers to UPS output sockets.
- Connect the UPS system only to an earthed shockproof socket outlet. Connection to any type of receptacle other than two pole, three wire grounded receptacle may result in shock hazard
- The building wiring socket outlet (shockproof socket outlet) must be easily accessible and close to the UPS system.
- Please use only VDE-tested, CE-marked mains cable (e.g. the mains cable of your computer) to connect the UPS system to the building wiring socket outlet (shockproof socket outlet).
- Please use only VDE-tested, CE-marked power cables to connect the loads to the UPS system.
- The UPS must be serviced by an authorized representative of Emerson Network Power. Failure to do so could result in personnel safety risk, equipment malfunction and invalidation of warranty.
- The Liebert PSA itON has been designed for Commercial/Industrial use only, and is not recommended for use in life support applications.
- In the event of Emergency press 'OFF' button and disconnect the power cord from AC Power supply to properly disable the UPS
- Do not plug UPS input to its own output. Do not attach power-strip or surge suppressor to the UPS

Operation

- Do not disconnect the mains cable on the UPS system or the building wiring socket outlet (shockproof socket outlet) during operations since this would cancel the protective earthing of the UPS system and of all connected loads.
- The UPS system features its own, internal current source (batteries). The UPS output sockets or output terminals block may be electrically lived even if the UPS system is not connected to the building wiring socket outlet.
- In order to fully disconnect the UPS system, first press the Standby switch then disconnect the mains lead.
- Ensure that no fluids or other foreign objects can enter the UPS system.

Maintenance, servicing and faults

- The UPS system operates with hazardous voltages. Repairs may be carried out only by qualified maintenance personnel.
- Caution - risk of electric shock. Even after the unit is disconnected from the mains power supply (building wiring socket outlet), components inside the UPS system are still connected to the battery and are still electrically live and dangerous.
- Before carrying out any kind of servicing and/or maintenance, disconnect the batteries and verify that no current is present and no hazardous voltage exist in the terminals of high capability capacitor such as BUS-capacitors.
- Only persons who are familiar with batteries and with the required precautionary measures may replace batteries and supervise operations. Unauthorised persons must be kept well away from the batteries.
- Caution - risk of electric shock. The battery circuit is not isolated from the input voltage. Hazardous voltages may occur between the battery terminals and the ground. Before touching, please verify that no voltage is present!
- Batteries may cause electric shock and have a high short-circuit current. Please take the precautionary measures specified below and any other measures necessary when working with batteries:
 - remove wristwatches, rings and other metal objects
 - use only tools with insulated grips and handles
- Do not short circuit battery terminals
- When changing batteries, install the same number and same type of batteries.
- Do not attempt to dispose of batteries by burning them. This could cause battery explosion.
- Do not open or destroy batteries. Escaping electrolyte can cause injury to the skin and eyes. It may be toxic.
- Please replace the fuse only by a fuse of the same type and of the same amperage in order to avoid fire hazards.
- Do not dismantle the UPS system

2 . Product 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 a small UPS, it's equipped with Smart RS-232 Communication Port to offer users more benefits. The download software helps users monitor UPS inside status. The main features of the UPS are listed below:

- Microprocessor control guarantees high reliability.
- Equipped with Boost and Buck AVR to stabilize the input voltage.
- DC Start Function.
- Built-in RS-232 Communication Port.
- Free Software bundled. (Please check UPS Monitoring Software for detail information).
- Green Power Function for energy saving.
- Auto restart while AC recovers.
- Compact size, Light weight.
- Provides Modem and Phone line Surge Protection.
- Provide AC Overload Protection

3. System Description

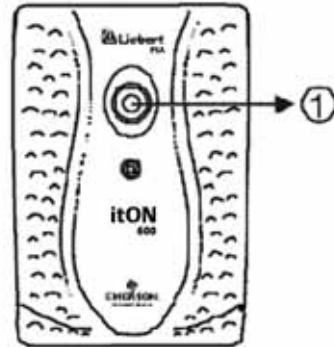
Front panel

1. Power Switch

LED

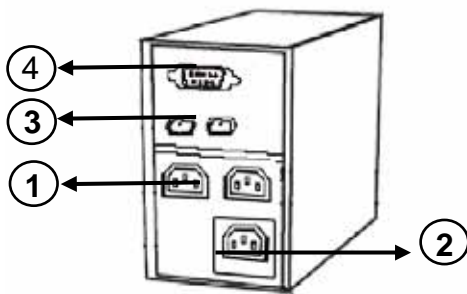
AC Mode: Green LED on

Battery Mode: Green LED flashing

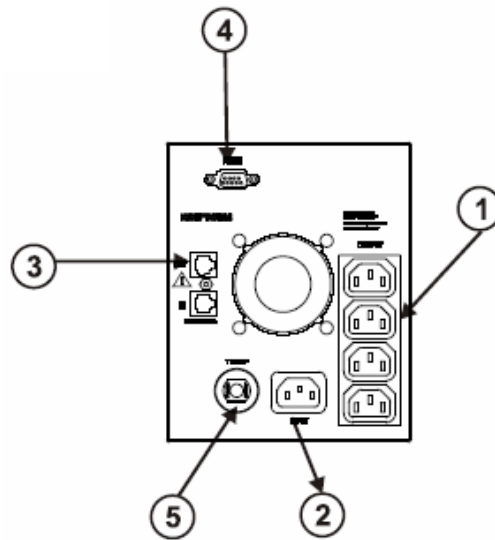


Back Panel

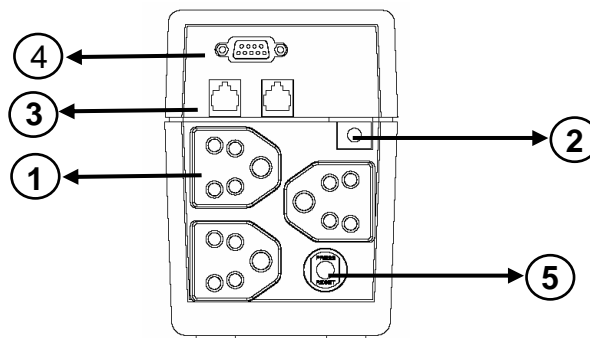
1. Output receptacles
2. AC Input
3. Modem / Phone line Surge Protection
4. Communication Port



itON 600



itON 1000



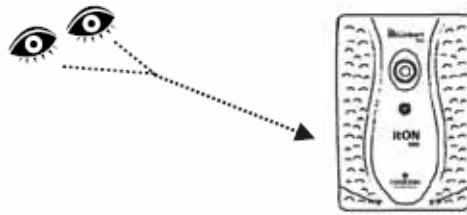
itON 600 (India Version)

4. Installation

Installing the UPS is as easy as following the steps shown. Be aware that the power Switch must be kept in the "ON" position, otherwise, the UPS will be disabled and your equipment will not be protected during a power failure.

4.1 Inspection

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

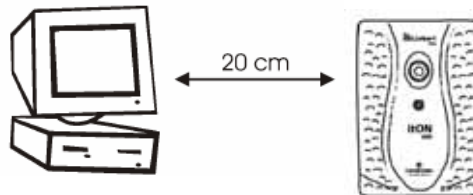


4.2 Placement

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.

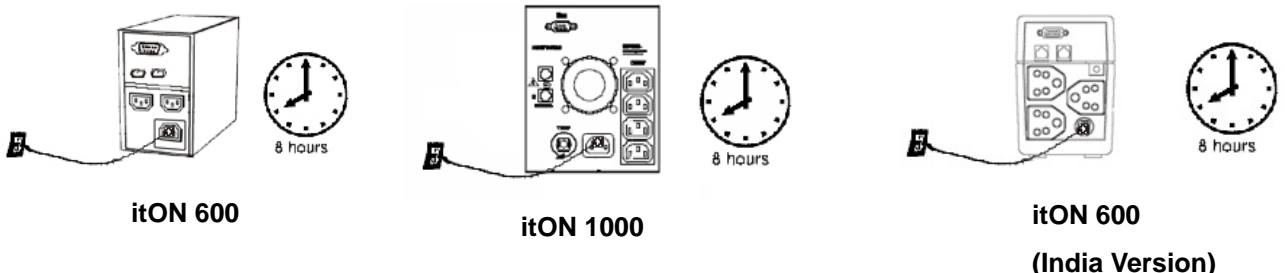


Also, place the UPS unit away from the monitor at least 20cm to avoid interference.



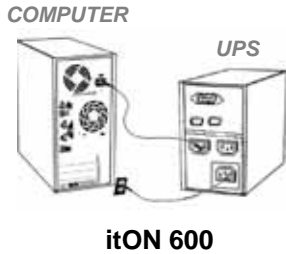
4.3 Charging

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. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 8 hours.

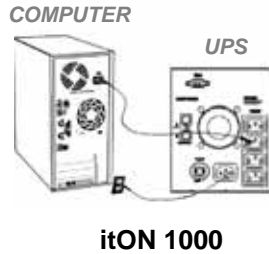


4.4 Computer Connection

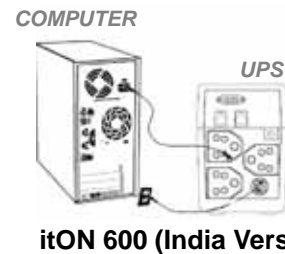
Connect one computer-related device into each of the power receptacles supplied on the back of the UPS.



itON 600



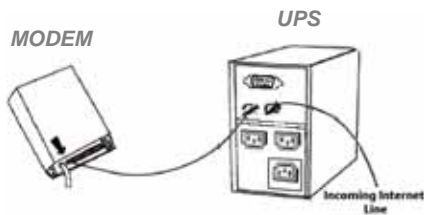
itON 1000



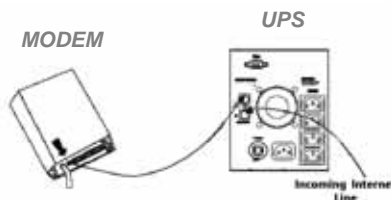
itON 600 (India Version)

4.5 Modem / Phone line Connection

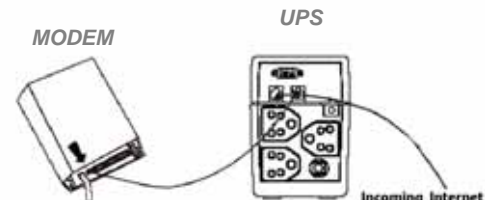
Plug incoming internet line into the "In" socket at the back of the UPS. Use one more Internet line cable and plug one end of the Internet line cable to the "Out" socket at the back of the UPS. Plug the other end of the modem input socket as shown below.



itON 600



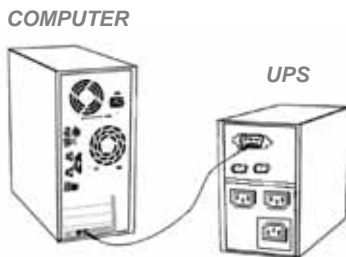
itON 1000



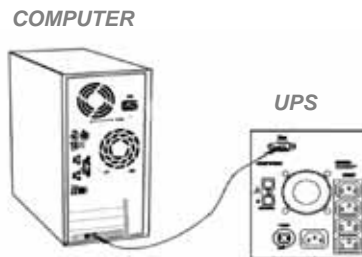
itON 600 (India Version)

4.6 Serial cable Connection

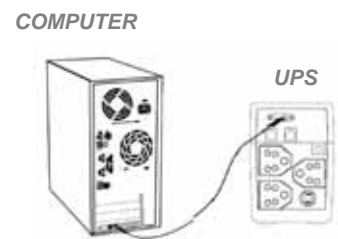
To allow for unattended system shutdown for your operating system, connect the serial cable as per diagram below.



itON 600



itON 1000



itON 600 (India Version)

4.7 Turn On / Off

To turn on the UPS, just simply press power switch. Please do so gently to extend the life of the power switch



4.8 DC Start Function

DC Start Function allows the UPS to start up when AC utility power is not available and the battery is fully charged. Just simply press the power switch to turn on the UPS.

4.9 Green Power Function

All these Series are equipped with Green Power Function*. If no load connects to the UPS, it will automatically shut down in 45 seconds for energy saving while power failure. The UPS will restart while AC recovers

* This feature is only applicable with itON 600

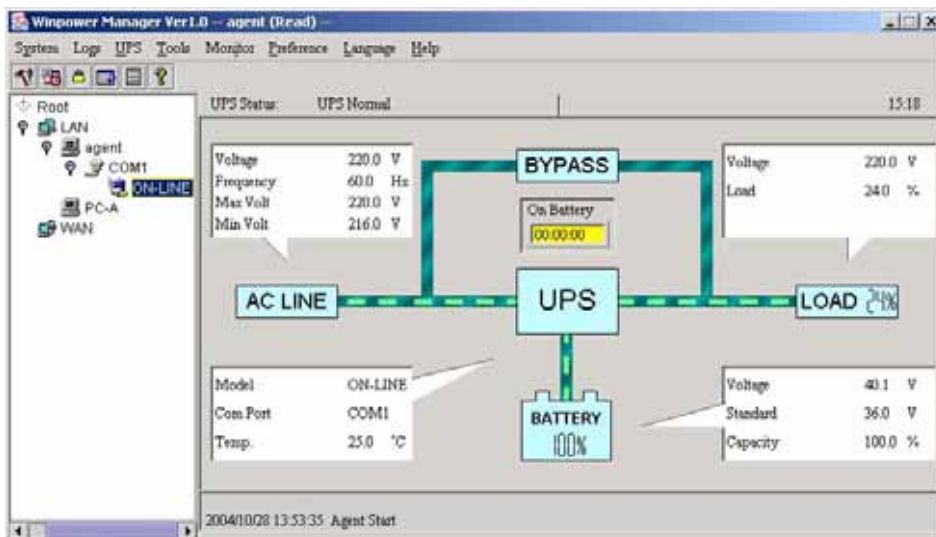
5. Software

Free UPS Monitoring Software

The UPS monitoring software, provides user-friendly interface to monitor and control your UPS. This unique software provides safe auto shutdown for multi-computer systems during a power failure. With this software, users can monitor and control any UPS on the same LAN no matter how far from the UPSs.

Features:

- Saves files before shutdown occurs
- Scheduled system shutdown
- Graphic display of UPS status
- Warning notification via E-mail
- User-friendly interface
- Multi-language versions



Installation procedure:

1. Insert the CD into CD ROM.
2. Connect the software cable
3. Follow the on-screen instructions to install the software.

When your computer restarts, the software will appear as a green plug icon located in the system tray, near the clock

6. Trouble Shooting

Symptom	Possible Cause	Remedy
No LED display on the front panel	1. Missing battery	1. Charge battery up to 4 hours
	2. battery defect	2. Replace with the same type of battery
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 reduced	1. Overload of the UPS	1. Remove some non-critical load
	2. Battery voltage is too low	2. Charge battery for 4 hours or more
	3. Battery defect due to high temperature operation environment, or improper operation of the battery	3. Replace with the same type of battery
Mains normal but LED is flashing	1. Breaker is flicked on	1. Reset the Breaker
	2. Power cord is loose	2. Reconnect the power cord properly

If any abnormal situations occur that are not listed above, please call the authorized Emerson Network Power service engineers immediately.

6. Technical Data

Liebert PSA itON		PS600-TN 600VA	PS1000-TN 1000VA
CAPACITY	V/AW	600VA/360W	1000VA/600W
INPUT	Voltage Range	140-300 VAC	160-300 V
	Frequency	45-65 Hz (Auto Sensing)	45-65 Hz (Auto Sensing)
OUTPUT	Voltage Range	230V	230V
	Voltage Regulation (Batt Mode)	+/-10%	+/-5%
	Frequency	50Hz or 60Hz	50Hz or 60Hz
	Frequency Regulation (Batt Mode)	+/-1Hz	+/- 1 Hz
	Output Waveform	Stepped Waveform	Stepped Waveform
	Overload	110% for 5 minutes as 'Mains' mode	110% for 5 minutes as 'Mains' mode
BATTERY	Battery Type & Number	12V/7AH - 1Pc	12V/7AH - 2 Pcs
	Backup time (*As per the loads)	15-22* mins	30 min typical* (with 1 PC)
	Recharge Time	8 hours to 90% after complete discharge	8 hours to 90% after complete discharge
TRANSFER TIME	Typical	4-8 ms	4-8 ms
INDICATOR	AC Mode	Green Lights up	Green Lights Up The 1st green lighting up, the 2nd to 5th green lighting up indicates load capacity
	Backup Mode	Green Flashes	Green Flashes The 1st green flashing, the 2nd to 5th green gradually lighting up indicates batteries capability
	Fault		Red Lighting up
AUDIBLE ALARM	Backup Mode	Sounds every 10 seconds	Sounds every 10 seconds
	Low Battery	Sounds every second	Sounds every second
	Overload	Sounds every 0.5 seconds	Sounds every 0.5 seconds
	Battery Replacement	Sounds every 2 seconds	Sounds every 2 seconds
	Fault	Continuously Sounding	Continuously Sounding
PROTECTION	Full Protection	Discharge, overcharge and overload protection	Discharge, overcharge and overload protection
PHYSICAL	Dimension (m,m) DxWxH	330 x 100 x 140	369x141x181
	Net Weight	6 kg	13.5 kg
ENVIRONMENT	Operating Environment	0-40 C 0-90% relative humidity (non condensing)	0-40 C 0-90% relative humidity (non condensing)
	Noise Level	Less than 40 db	Less than 40 db
INTERFACE	RS 232	Support Windows 95/98/NT/2000/XP and Linux	Support Windows 95/98/NT/2000/XP and Linux

*For additional information on backup please contact your local Emerson Network Power representative