Liebert® PSA™

Quick-Start Guide - 1000VA/1500VA, 230V

EMERSON Network Power

Important Safety Instructions

- Do not connect equipment that may overload the UPS or demand half-wave rectification, such as a laser printer.
- Connect the UPS only to an earthed / grounded socket that meets electrical safety guidelines.
- Locate the UPS near a wall socket. Do not use an extension cord between the UPS and the socket.
- Use CE-marked cables only for connections between mains, the UPS and equipment.
- The Liebert PSA has been designed for small office/home office use only; it is NOT recommended for use in life-support applications.
- In the event of an emergency, press the OFF button and disconnect the power cord from the AC mains to properly disable the UPS.
- Do not attach power strips or surge suppressors to the UPS.
- Do not attempt to service any parts inside the UPS except the batteries. Failure to adhere to this could cause personal injury or equipment malfunction and void the warranty.
- For technical support:
  - Visit **www.liebert.com** or
  - Send an e-mail to **upstech@emersonnetworkpower.com**.

Setup

Step 1 Inspect the Package

Inspect the package and the UPS upon receipt. Notify the carrier and dealer of visible damage.

UPS

Liebert shutdown software CD

Quick-start guide

USB cable

Step 2 Decide Where to Place the UPS

The UPS must be placed indoors, protected from water, direct sunlight and excessive heat.

Provide at least 100mm (4") of clearance on all sides of the unit for proper ventilation.

Step 3 Charge the UPS Battery Before Use

The UPS battery is not charged before shipping. It MUST be charged before use.

- Connect a user-supplied power cord from the UPS to a wall socket and charge for at least eight hours.

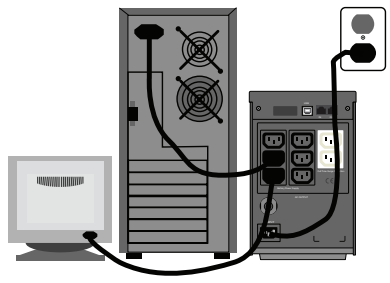
Note: If battery is placed in storage, charge the battery every six months if kept at -15°C to +29°C (5°F to 85°F)—or every three months if kept at 30°C (86°F) or higher.

Step 4 Start the UPS

After the battery is fully charged:

- Turn on the UPS by pressing the On/Off button (see **Figure 1** below).
  LED 1 should be illuminated (green), indicating the UPS is operating in Normal Mode.

Step 5 Connect the Loads

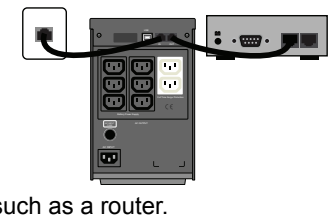


The UPS has three battery backup sockets that provide power when the UPS operates on battery (see **Figure 2** below).

- Plug the loads into the battery backup sockets on the rear of the UPS.

Caution: Do not connect a laser printer to the UPS.

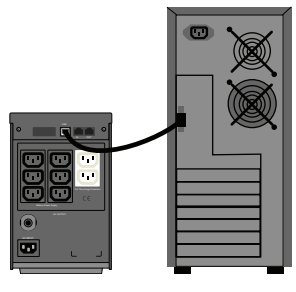
Step 6 Connect the Network Surge Protection



The UPS has two RJ-45 jacks for network lines (see **Figure 2** below).

- Connect a single-line network cable into the RJ-45 network surge protection IN jack on the rear of the UPS.
- Connect an RJ-45 cable from the OUT jack on the rear of the UPS to a port on a PC or network device such as a router.

Step 7 Set Up Liebert shutdown software



To start using the Liebert shutdown software:

- Install the Liebert shutdown software. See the software user manual for installation instructions.
- Connect one end of the USB cable (supplied) to the USB port on the rear of the UPS. Connect the other end to a USB port on the computer. See the software user manual for operating instructions.

UPS Controls and Connections

Figure 1 - Front Panel LEDs

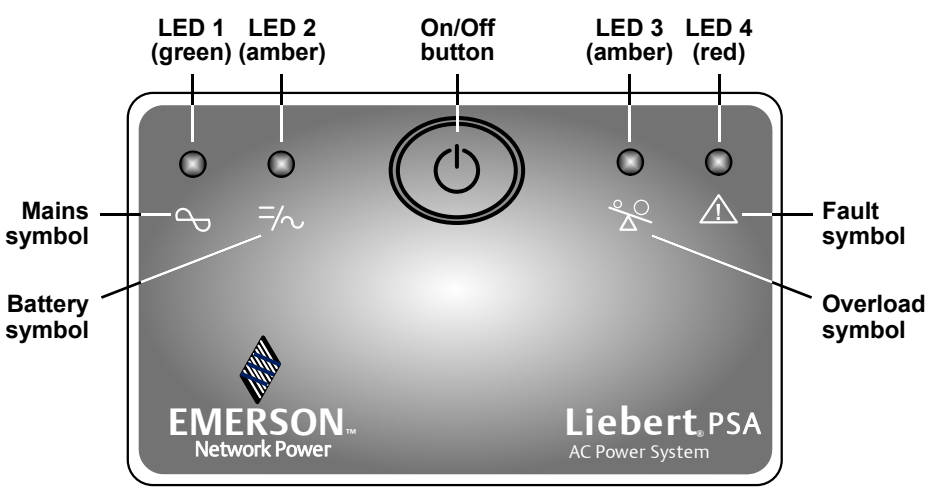
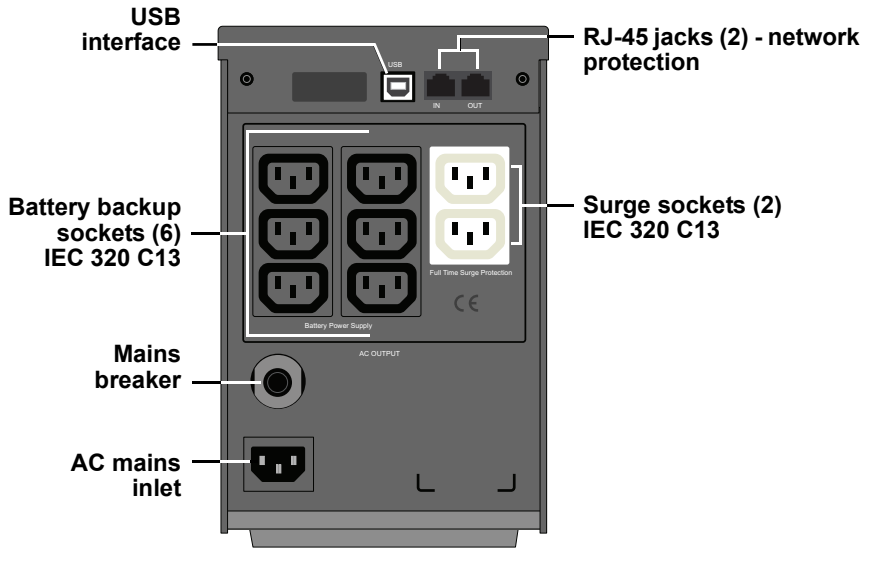


Figure 2 - Rear Panel



UPS Status, Alarm Conditions and Alerts

Condition	LED	Color	Solid/Flashing	Audible Alarm
Normal Mode	LED 1	Green	Solid (steady glow)	(None)
Battery Mode	LED 2	Amber	Flashes every 3 seconds	Every 3 seconds
Battery Low	LED 2	Amber	Flashes every 1 second till end of discharge (EOD)	Every 1 second
Overload	LED 3	Amber	Solid (steady glow) until load drops or breaker trips	Continuous
Battery Replacement	LED 4	Red	Flashes every 1 second for 5 seconds only	Every 1 second for 5 seconds only
Fault	LED 4	Red	Solid (steady glow) until UPS shuts down after 5 seconds	Continuous until UPS shuts down

Replacing the Battery

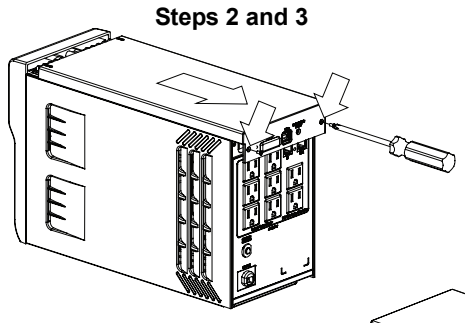
To replace the battery:

1. Turn off all connected loads, then turn off the UPS (batteries are NOT hot-swappable).
2. Use a Phillips head screwdriver to remove the two top cover screws from the back of the UPS.
3. Slide the top panel backward 13mm (1/2"). Slide the front panel upward, then pull outward to remove it
4. Gently pull the batteries out of the UPS.
5. Remove the black wire from the negative (-) terminal and the red wire from the positive (+) terminal.
6. Verify that the replacement battery matches the dimensions and battery type in the **Specifications** section below.
7. Connect the battery leads to the new batteries. Be sure to reconnect the red wire to the positive (+) terminal and the black wire to the negative (-) terminal.

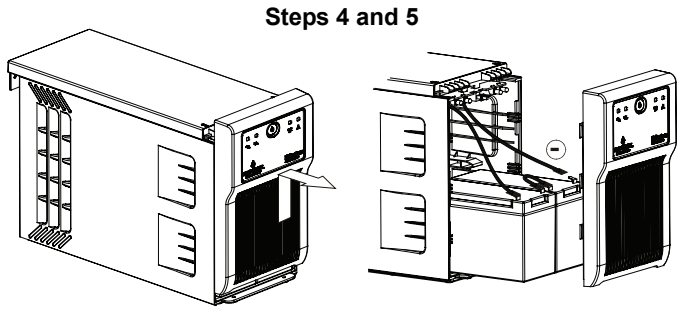
   Note: Small sparks may occur at the battery connectors during reconnection.
8. Slide the batteries into the UPS.
9. Reposition the front panel and slide downward until it slides into place. Slide the top panel forward until flush with the front panel. Reinsert the two top cover screws removed in **Step 2**.

Dispose of the old batteries properly at an appropriate recycling facility.

Steps 2 and 3



Steps 4 and 5



Troubleshooting

If the UPS malfunctions during operation, check the following chart for proper adjustment. For further assistance, please contact your local Emerson Network Power representative.

Problem	Possible Causes	Solutions
Mains is normal, but LED 1 is not illuminated.	The UPS may not be turned on. The power cord may not be connected properly. The upstream mains circuit breaker may be tripped.	• Press the On/Off button to turn on the UPS. • Connect the power cord securely into a wall socket. • Reset the circuit breaker.
LED 2 flashes (amber) every 3 seconds, but there is no output power.	Battery voltage may be too low.	• Recharge the UPS for 8 hours.
Alarm buzzer beeps continuously although mains is normal.	The UPS may be overloaded (check LED 2).	• Disconnect some equipment from the UPS.
UPS does not provide expected backup time.	The UPS battery reached end of life.	• Replace the internal battery.
The UPS is on and connected to mains, but fails to operate properly.	Mains may be outside the unit's operating range.	• If mains is normal, try reconnecting mains and restarting the UPS.

Specifications

Model Number	PSA1000MT3-230U	PSA1500MT3-230U
Capacity (VA/W)	1000/600	1500/900
Net Weight, kg (lb.)	9.5 (20.9)	11.6 (25.6)
Shipping Weight, kg (lb.)	10.7 (23.6)	12.8 (28.2)
Dimensions - W x D x H, mm (in.)	147 x 360 x 234 (5.8 x 14.2 x 9.2)	
On-Line Mains Voltage	160-287VAC	
On-Line Frequency	50/60Hz ±5Hz	
Output Voltage (Mains Normal)	Typical 185-252VAC	
Output Voltage (Battery Operation)	230VAC ±5%	
On-Battery Wave Form	Stepped sinewave	
Battery Type - VDC x Ah x Quantity	12V x 7.2Ah x 2	12V x 9Ah x 2
Typical Recharge Time	6-8 hours to 90%	
Battery Run Time*	60-100 minutes	
Audible and Visual	Audible alarm / LED	
Backup Sockets	IEC 320 C13 (6)	
Surge Sockets	IEC 320 C13 (2)	
Operating Temperature, °C (°F)	0 to 40 (32 to 104)	
Storage Temperature, °C (°F)	-15 to 40 (5 to 104)	
Operating / Storage Relative Humidity	0%-90%, non-condensing	
EMI Classification	Class B	
Agency		
Safety	IEC62040-1-1	
Transportation	ISTA Procedure 1A Certification	

* Battery run time may vary depending on load

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