Emerson GXT4-1000RT120

Liebert GXT4 UPS 1000VA User Manual

Model: GXT4-1000RT120

1. Introduction

The Vertiv Liebert GXT4 UPS, with a capacity of 1000VA/900W, is a compact and reliable solution designed to maintain the health and availability of your IT infrastructure. This Uninterruptible Power Supply (UPS) utilizes on-line, double-conversion technology to protect connected equipment from a full range of power disturbances, including sags, surges, and noise. This technology ensures that the UPS does not draw on battery power during minor fluctuations, thereby extending battery life and minimizing replacement frequency. The GXT4-1000RT120 operates on 120V AC power and features hot-swappable batteries. It includes all necessary hardware for installation in either a tower configuration or an equipment rack. This model is Energy Star qualified and incorporates a selectable eco-mode to enhance efficiency during off-peak hours. The Vertiv Liebert GXT4 is engineered for applications where downtime is not an option, offering outstanding performance and reliability.



Figure 1: Front view of the Liebert GXT4 UPS, showing the display panel and ventilation.

2. Safety Information

Please read and understand all safety instructions before installing, operating, or maintaining the Liebert GXT4 UPS. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Safety:** This unit contains high voltage. Do not open the UPS enclosure. Servicing should only be performed by qualified personnel.
- **Battery Safety:** Batteries can present a risk of electrical shock and high short-circuit current. Observe the following precautions when working with batteries:
  - Do not dispose of batteries in a fire; they may explode.
  - Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes.
  - Replace batteries only with the same type and number of batteries as specified by the manufacturer.
- **Grounding:** The UPS must be connected to a grounded AC power outlet.
- **Environment:** Install the UPS in a controlled environment, free from excessive dust, humidity, and extreme temperatures. Ensure adequate ventilation.
- **Weight:** The UPS is heavy (approximately 40 pounds). Use proper lifting techniques or assistance when moving the unit to prevent injury.

3. What's in the Box

Upon unpacking your Liebert GXT4 UPS, verify that all components listed below are present and undamaged. If any items are missing or damaged, contact your supplier immediately.



Figure 2: Contents included with the Liebert GXT4 UPS, showing the UPS unit, rackmount rails, tower stands, cables, and documentation CD.

- Liebert GXT4 1000VA UPS Unit
- 4-post Rack-mounting Rail Kit

- Tower Support Stands
- Input Power Cable (10 feet)
- USB Cable (3.9 feet)
- Quick Start Guide
- User Manual (on CD)
- Liebert Multilink Shutdown Software (on CD)
- UPS Configuration Program (on CD)
- Terminal Block Communication Terminals
- Rack mounting hardware including screws

4. Product Overview

4.1 Front Panel

The front panel of the Liebert GXT4 UPS features an LCD display and control buttons for monitoring system status, configuring settings, and performing basic operations.



Figure 3: Diagram of the Liebert GXT4 LCD panel and control buttons, indicating various indicators and button functions.

- **LCD Panel:** Displays real-time UPS status, alarms, and configuration menus.
- **Indicators:**
  - *Fault Indicator:* Illuminates if a system fault occurs.
  - *Inverter Indicator:* Shows inverter operation status.
  - *Battery Indicator:* Indicates battery status (charging, discharging, low battery).

- *Bypass Indicator:* Shows when the UPS is operating in bypass mode.
- *Programmable Outlet 1 & 2 Indicators:* Show status of programmable output groups.
- *ECO Mode Indicator:* Illuminates when the UPS is operating in Eco-mode.

- **Control Buttons:**
  - *ESC Button:* Used to exit menus or cancel operations.
  - *UP Button:* Navigates up through menus or increases values.
  - *DOWN Button:* Navigates down through menus or decreases values.
  - *ENTER Button:* Confirms selections or enters sub-menus.

4.2 Rear Panel

The rear panel provides all necessary input and output connections for the UPS, including power input, output receptacles, and communication ports.

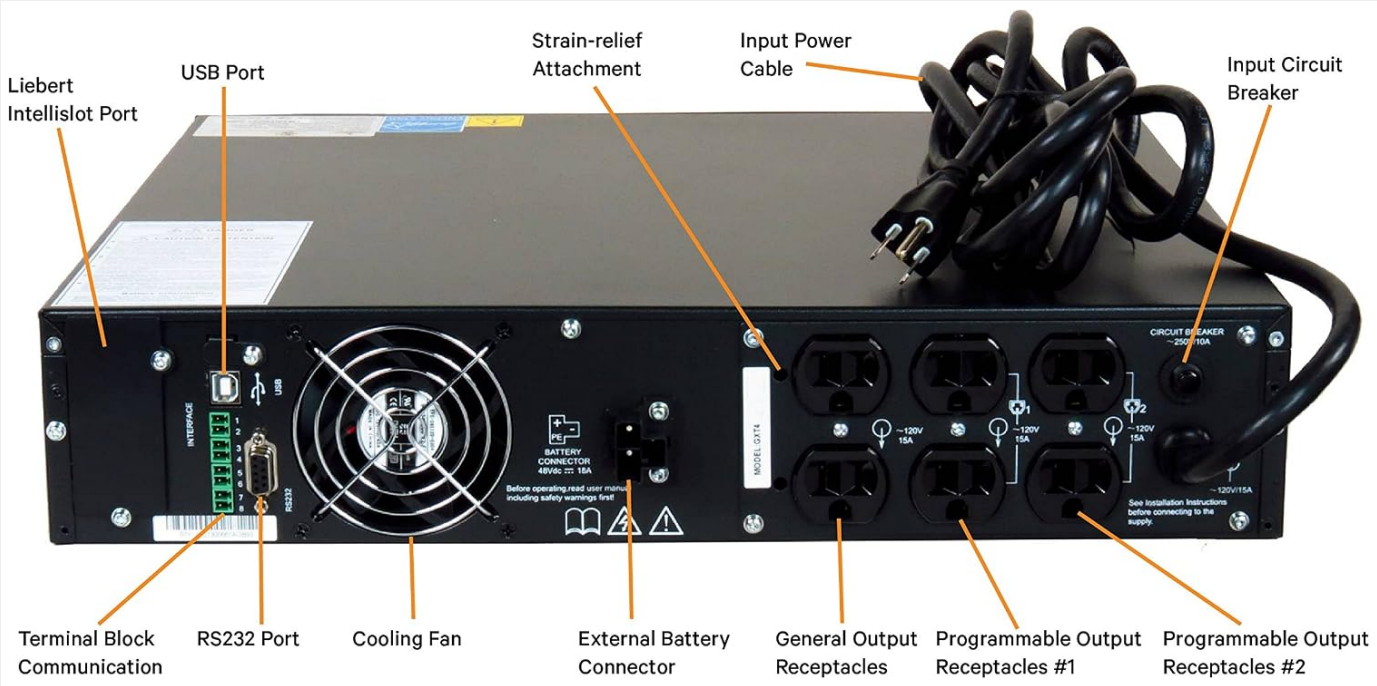


Figure 4: Rear view of the Liebert GXT4 UPS, highlighting various ports and receptacles for power and communication.

- **Input Power Cable:** Connects the UPS to the utility power source.
- **Input Circuit Breaker:** Provides overcurrent protection for the input.
- **General Output Receptacles:** Standard NEMA 5-15R outlets for general equipment.
- **Programmable Output Receptacles:** Outlets that can be controlled independently or in groups via software.
- **External Battery Connector:** For connecting optional external battery cabinets to extend runtime.
- **Cooling Fan:** Dissipates heat from the internal components.
- **RS232 Port:** Serial communication port for monitoring and control.
- **USB Port:** USB communication port for monitoring and control.
- **Liebert Intellislot Port:** For optional communication cards (e.g., SNMP, relay).
- **Terminal Block Communication:** Provides dry contact closures for remote monitoring.
- **Strain-relief Attachment:** Secures the input power cable.

5. Setup and Installation

The Liebert GXT4 UPS can be installed in two primary configurations: as a tower unit or mounted in a standard 19-inch equipment rack.

5.1 Tower Installation

For tower installation, attach the provided tower support stands to the bottom of the UPS unit. Ensure the unit is placed on a stable, level surface with adequate clearance for ventilation.

5.2 Rackmount Installation

The UPS includes a rackmount kit for easy installation into a standard 19-inch rack.

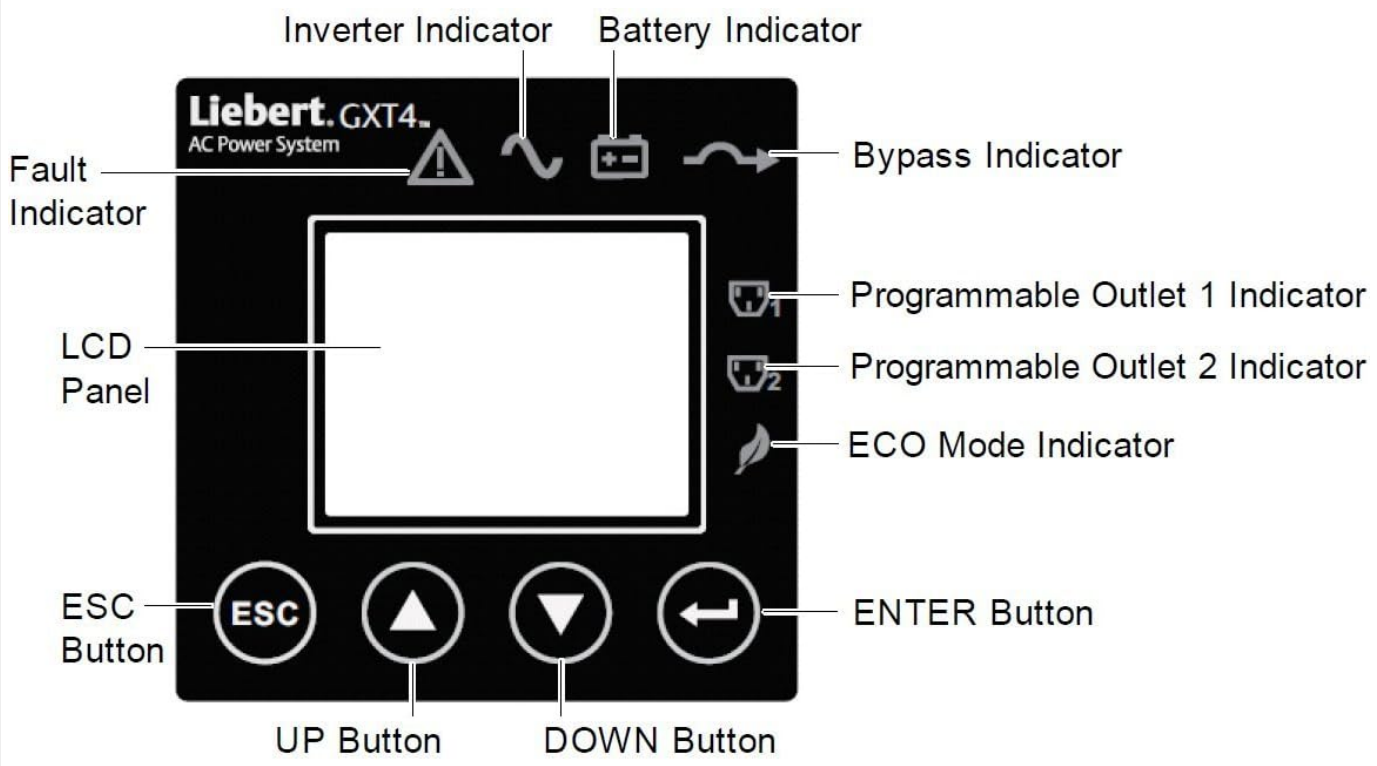


Figure 5: Liebert GXT4 UPS installed in a standard server rack using the included rackmount kit.

1. Attach the rack-mounting rails to the sides of the UPS unit using the provided screws.
2. Secure the rails to the front and rear posts of your equipment rack.
3. Slide the UPS into the rack until it is fully seated and secured.
4. Connect the input power cable to a dedicated 120V AC outlet. Note that the input is an L5-30 twist-lock connector.
5. Connect your critical equipment to the output receptacles on the rear panel. Distribute the load evenly across the general and programmable outlets.
6. For monitoring and control, connect the USB or RS232 cable from the UPS to your computer or server.

6. Operating Instructions

Once installed, the Liebert GXT4 UPS is designed for continuous operation.

- **Power On/Off:** To power on the UPS, press and hold the power button until the display illuminates. To power off, press and hold the power button again. The power button is configured to prevent accidental shutdown.
- **LCD Display Navigation:** Use the UP and DOWN buttons to navigate through the menus on the LCD panel. Press ENTER to select an option or confirm a setting, and ESC to go back.
- **Eco-Mode:** The UPS features a selectable eco-mode that can be enabled via the LCD panel or management software. When activated, eco-mode optimizes efficiency by operating in a high-efficiency line-interactive mode

during stable power conditions, switching to online double-conversion only when power quality degrades.

- **Battery Self-Test:** Regularly perform a battery self-test through the LCD menu to ensure battery health and readiness.
- **Software Monitoring:** Install the Liebert Multilink Shutdown Software and UPS Configuration Program from the included CD to enable advanced monitoring, automatic shutdown of connected equipment during extended power outages, and remote management.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your Liebert GXT4 UPS.

- **Battery Replacement:** The Liebert GXT4 UPS features hot-swappable batteries, allowing for replacement without powering down connected equipment. Refer to the detailed user manual (on CD) for specific battery replacement procedures. Replace batteries with genuine Liebert replacement battery kits only.
- **Cleaning:** Keep the UPS free from dust and debris. Use a soft, dry cloth for cleaning the exterior. Do not use liquid cleaners or solvents. Ensure ventilation openings are clear.
- **Environmental Conditions:** Maintain the operating environment within the specified temperature and humidity ranges to prevent premature component failure.

8. Troubleshooting

This section provides solutions to common issues you might encounter with your Liebert GXT4 UPS. For more complex problems, consult the full user manual or contact technical support.

Problem	Possible Cause	Solution
UPS does not turn on.	No input power; Battery discharged; UPS fault.	Check input power cable and circuit breaker. Allow UPS to charge for several hours. Check LCD for fault codes.
UPS beeps continuously.	On battery power; Overload; Battery fault.	Check utility power. Reduce connected load. Perform battery self-test; replace battery if necessary.
Connected equipment loses power.	UPS shut down due to low battery; Overload; UPS fault.	Check UPS status on LCD. Ensure total load does not exceed UPS capacity.
Loud fan noise.	Normal operation under heavy load; Fan malfunction.	Fan speed increases with load and temperature. If noise is excessive or unusual, contact support.

9. Specifications

Detailed technical specifications for the Liebert GXT4-1000RT120 UPS.

Feature	Value
Model Number	GXT4-1000RT120
Capacity (VA/W)	1000VA / 900W
Input Voltage	120V AC

Feature	Value
Output Voltage	120V AC (Sine Wave)
Technology	Online Double Conversion
Product Dimensions (L x W x H)	16.2 x 16.9 x 3.4 inches
Item Weight	40 pounds
Battery Type	Lead Acid (Product Specific batteries required, included)
Battery Voltage	12 Volts (internal battery configuration is 48VDC level as per review)
Color	Black
Energy Efficiency	Energy Star Qualified, Selectable Eco-Mode
First Available Date	January 16, 2015



Figure 6: Dimensions of the Liebert GXT4 UPS (16.20 in height, 16.90 in depth, 3.40 in width).

10. Warranty and Support

For warranty information, technical support, or service inquiries regarding your Liebert GXT4 UPS, please refer to the official documentation included with your product or visit the Emerson/Vertiv support website.
Optional protection plans are available for extended coverage:

- 2-Year Protection Plan
- 3-Year Protection Plan
- Complete Protect (monthly subscription covering eligible past and future purchases)

Always ensure you have your product model number (GXT4-1000RT120) and serial number ready when contacting support.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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