Liebert
Keeping Business in Business

# UPStation GXT™

## 6 & 10 kVA
## Optional Battery Cabinet

# USER MANUAL
English



chdutieuthuat.com

# IMPORTANT SAFETY INSTRUCTIONS

**WARNING:** Do not attempt to service this product yourself. Opening or removing the cover will expose you to dangerous voltages. Refer all servicing to qualified service personnel.

**SAVE THESE INSTRUCTIONS.** THIS MANUAL CONTAINS IMPORTANT INSTRUCTIONS THAT SHOULD BE FOLLOWED DURING INSTALLATION AND MAINTENANCE OF THE BATTERY CABINET AND UNINTERRUPTIBLE POWER SYSTEM (UPS).

1. This battery cabinet option is designed for use with Liebert Uninterruptible Power System (UPS) models GXT 6/10 kVA and for installation by qualified electrical personnel only. The battery cabinet must be installed in accordance with local/national electrical codes.
   - Up to two optional battery cabinets may be connected to the UPS to provide additional run time.
   - Battery cabinet models GXT240VBATT and GXT240VBATTUL are safety approved for use with GXT6000 models only.
   - Battery cabinet models GXT240VLRT and GXT240VLRTUL are safety approved for use with GXT10000 models only.
2. Read all safety and operating instructions before operating the UPS and battery cabinet. Adhere to all warnings on the unit and in this manual. Follow all operating and user instructions.
3. These battery cabinets are very heavy. Use adequate handling procedures to move these cabinets into position, especially when maneuvering across carpeted areas or uneven surfaces. If this cabinet is to be installed on a suspended floor, check that the total floor loading presented by the UPS and its battery cabinets and the localized point loading presented by the leveling feet are within acceptable limits for the flooring.
4. This battery cabinet must be installed in an area with unrestricted airflow away from water, flammable liquids, gases, corrosives, or conductive contaminants, in an ambient temperature range of 0 – 40º C. **NOTE:** Battery cabinet operation in ambient temperatures exceeding 25º C reduces battery life. Competent personnel should be consulted if liquid spills into the product. Slits and openings in the cabinet are provided for ventilation. Never block or insert objects into these ventilation holes or openings.
5. CAUTION: A BATTERY PRESENTS A RISK OF ELECTRICAL SHOCK FROM A SHORT CIRCUITED CURRENT. Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Refer all servicing to qualified service personnel. WHEN REPLACING THE BATTERIES AT END OF LIFE, USE THE SAME NUMBER AND TYPE OF BATTERIES. PROPER DISPOSAL OF BATTERIES IS REQUIRED. REFER TO YOUR LOCAL CODES FOR DISPOSAL REQUIREMENTS.
6. Turn the UPS and battery cabinet OFF before cleaning. Use only a soft cloth, never liquid or aerosol cleaners. Keep the front and rear vents free of dust accumulation that could restrict airflow.

## GLOSSARY OF SYMBOLS



Indicates Caution: Note the accompanying instructions



Requests the user to consult the manual for additional information




Indicates that the unit contains a valve regulated lead acid battery



Indicates Caution: Risk of electrical shock

## SYSTEM DESCRIPTION AND OPERATION

Congratulations on your choice of the UPStation GXT™ Uninterruptible Power System (UPS) Battery Cabinet. The battery cabinets greatly extend the backup time of your UPS during a power outage. Either one or two optional cabinets may be connected to the UPS.

When the UPS manual instructs the operator to close the battery circuit breaker on the rear of the UPS, the operator should also close all of the circuit breakers on the rear of the battery cabinets. Likewise, when the operator is instructed to open the UPS battery circuit breaker, the circuit breakers on the optional battery cabinets should also be opened.

**CAUTION:** When the UPS manual instructs the operator to open all circuit breakers to fully isolate the UPS, be sure to open the circuit breakers on the battery cabinets also.

## MAINTENANCE

The UPStation GXT battery cabinets require very little maintenance. The batteries are valve regulated, nonspillable, lead acid and should be kept charged to obtain their designed life. The UPS continuously charges the batteries when connected to the AC power supply.

When storing the UPS for any length of time, it is recommended to apply power to the UPS for at least 24 hours every four to six months to ensure full recharge of the batteries. In no case should the unit be stored in excess of nine months without recharge. Periodically, examine the vents on the front and rear of the cabinet, and remove any obstructions from the surface of the vents.

manualslib.com

# INSTALLATION INSTRUCTIONS

**INSTALLATION CONSIDERATIONS**
Detailed instructions to help you install the batteries are provided in the following pages; however, you should give some consideration to the proposed environment in which the UPS is to be installed, and carry out some preparatory work.

**WARNING**: 240V BATTERIES – RISK OF ELECTRICAL SHOCK
Before installing, ensure that the UPS is shutdown, all circuit breakers on the rear of the UPS and battery cabinets are off and the mains supply is locked off. For safety, check with a DC voltmeter that no voltages exist on the battery positive-negative terminals of both the UPS and the battery cabinets. Also check voltages between these terminals and ground (earth) before touching or wiring to these terminals.

**UNPACKING AND INSPECTION**
Follow unloading instructions printed on the carton. Do not discard any packaging until installation is complete, check that you have removed to a safe place the user manual, stabilizing brackets, and any other items shipped with the unit to be used in its installation.
**CAUTION:** The GXT240VBATT models weigh up to 160 kg (353 lbs) and the GXT240VLRT models weigh up to 395 kg (871 lbs). Use adequate handling aids when moving or installing the UPS. The cabinet is fitted with castor wheels for easy movement. Take care when the cabinet is removed from its packing and being wheeled across an uneven floor without the stabilizers fitted so that it does not tip over.
Before you install the battery cabinets, give it a thorough visual examination to ensure it has not been subjected to shipping damage. If it is not in perfect condition, you should advise both the shipper and the supplier immediately. DO NOT ATTEMPT TO INSTALL A DAMAGED BATTERY CABINET.

**LOCATION**
Locate the batteries indoors in a controlled environment next to the UPS. Locate it in an area with unrestricted airflow, away from water, flames, flammable liquids, gases, corrosives, or conductive contaminants.
Give consideration to the airflow requirements and allow at least 150 mm (6 inches) free space around the cabinet, with a minimum of 300 mm (12 inches) at the back to enable easy operator access to the rear panel mounted circuit breakers.

Electrical maintenance/servicing requires access to all four sides of the battery cabinets. Provide the necessary free space or use a flexible wiring system to allow the cabinet to be pulled forward.
Maintain an ambient temperature range of 0 - 40° C (32-104° F)
**Note:** Operation in temperatures above 25°C (77°F) reduces battery life.

**ELECTRICAL CONNECTIONS**

The UPS and battery cabinets are supplied with battery terminals on the rear of the UPS within a cable box. (see outline drawing) The cable box (gland plate) can be removed to enable knockouts to be removed, or new holes drilled, to secure the cables.

The cable sizes and distribution methods used during installation are subject to local/national electrical codes of practice, and therefore are not detailed here. Refer to the tables and wiring diagram in the UPS manual for your specific model. Information is also provided on the battery cabinet rating plate. Rigid or flexible conduit is recommended for all battery wiring.

The battery cabinet terminals will accept wire sizes up to the values below:

GXT6000 = 10 $mm^2$ (8 AWG) Recommended for all GXT6000 wiring.

GXT10000 = 16 $mm^2$ (6 AWG) Recommended for all GXT10000 wiring.

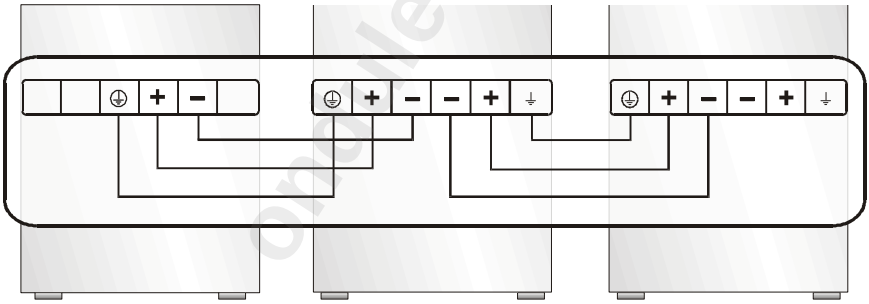
(75º C copper wire)

Terminal tightening torque is 40 cm-kg (35 in-lb).

In no case should the voltage drop on the battery cables exceed 2.0 volts at the battery cabinet's rated load.

Properly grounded (earthed) equipment provide multiple benefits.

High quality ground (earth) connections are required for the equipment ground conductors (protective earth) and grounding electrode conductor (power system earth connection) to reduce electrical noise and provide for safe operation of the UPS and connected loads. Conduit used alone without a grounding conductor wire is not an acceptable connection. Size ground (protective earth) conductors equal to circuit conductors.



**GXT 6&10 kVA**

**GXT 6&10 Battery Cabinets**

## STABILIZERS / LEVELING FEET

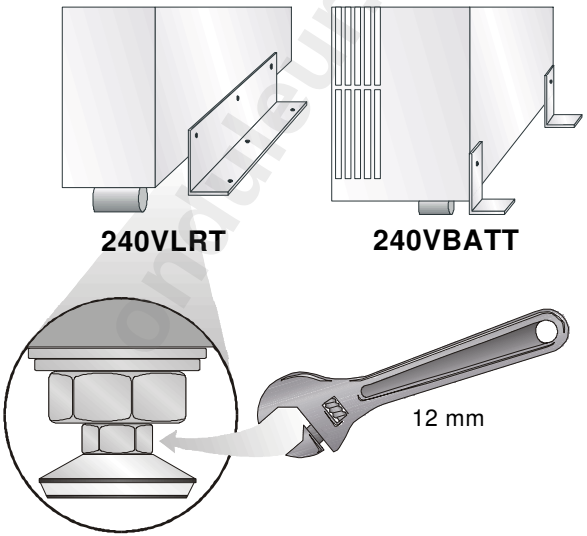
When the battery cabinet is located in its final position before or after wiring, it is necessary to fit stabilizer brackets and, if necessary, adjust the leveling feet. If the UPS is wired using a rigid wiring system, then movement of the UPS must be prevented by winding down the 4 leveling feet under the UPS as shown below. For UPS wired with flexible cables, this is optional.

Adjust the leveling feet as necessary using a 12mm open-ended wrench. DO NOT LOOSEN THE LARGER NUT ABOVE, AS THIS FIXES THE LEVELING FEET TO THE CHASSIS.

Attach the stabilizing brackets as follows.

GXT240VBATT or GXT240VBATTUL models:
1. Using a Phillips-head screwdriver, remove the screws (4) from each of the bottom corners of the side panels.
2. Attach the stabilizing brackets to each corner using screws just removed.

GXT240VLRT or GXT240VLRTUL models:
1. Using a Phillips-head screwdriver, remove the two inner-most screws at the base of both side panels.
2. Attach the stabilizers fixing with the screws just removed.




***Leveling Feet Adjustment Diagram***

## COMMISSIONING THE UPS WITH OPTIONAL BATTERIES

1. **BEFORE STARTING THE UPS OR CLOSING ANY CIRCUIT BREAKERS,** verify the proper wiring of the optional battery cabinets. Using a continuity meter, verify that positive (+) terminals are only connected to positive terminals on the rear of the UPS and battery cabinets. Again, check that negative (-) terminals are only connected to negative terminals. Be sure to check every wire interconnecting the UPS and optional battery cabinets. Verify that the positive and negative terminals are not in contact with ground (earth).
   **WARNING: REVERSING THE BATTERY CONNECTIONS CREATES A SERIOUS HAZARD TO BOTH THE EQUIPMENT AND SERVICE TECHNICIAN. CHECK THESE CONNECTIONS CAREFULLY BEFORE TURNING ON ANY CIRCUIT BREAKERS.**
2. Install the covers on the cable entry boxes.
3. Leave the circuit breakers on the rear of the battery cabinets off. Perform all UPS commissioning instructions in the UPS manual using only the internal batteries controlled by the circuit breaker on the rear of the UPS.
4. Next, commission the UPS again while leaving open the battery circuit breaker on the rear of the UPS and closing all circuit breakers on the rear of the optional battery cabinets.
5. Finally, check the UPS with all battery circuit breakers closed. The system is now ready for normal operation.

| SPECIFICATIONS | | | | |
|---|---|---|---|---|
| **Model Number** | GXT240VBATT | GXT240VBATTUL | GXT240VLRT | GXT240VLRTUL |
| **Rating** | 240VDC / 32A | | 240VDC / 50A | |
| **Battery Type** | 12V x 20 (x2); 7.0 or 7.2 Ah; Valve-regulated, nonspillable, lead acid | | 12V x 20; 40 Ah; Valve-regulated, nonspillable, lead acid | |
| **Weight: kg (lbs)** | | | | |
| Unit | 125 (275.6) | 128 (282.2) | 365 (804.8) | |
| Shipping | 157 (346) | 160 (353) | 395 (871) | |
| **Dimensions: mm (in)** | | | | |
| Unit (W x D x H) | 260x612x703 (10.2x24.1x27.7) | 260x612x803 (10.2x24.1x31.6) | 380x726x965 (15.0x28.6x38.0) | |
| Shipping (W x D x H) | 400x850x965 (15.8x33.5x38) | 400x850x1065 (15.8x33.5x42) | 560x850x1235 (22.1x33.5x48.7) | |

# LIMITED WARRANTY

Liebert Corporation extends the following LIMITED WARRANTY to the purchaser and to its customer (collectively referred to as the "Purchaser"): the enclosed Battery Cabinet and components are free from defects in materials and workmanship under normal use, service, and maintenance FOR A PERIOD OF TWO YEARS FROM THE DATE OF ORIGINAL PURCHASE from Liebert or the Liebert dealer or retailer. THE FOREGOING WARRANTY IS THE ONLY WARRANTY GIVEN AND NO OTHER WARANTY IS PROVIDED, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Certain aspects of disclaimers are not applicable to consumer products acquired by individuals and used for personal, family, or household purposes (as distinguished from industrial or other purposes). Local laws may not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may have other rights, which vary according to local law.

Certain repairs or services are the responsibility of the Purchaser and the Purchaser is expected to pay for them. This warranty does not extend either to products with removed or altered serial numbers or to any losses or damages due to act of God or source external to the product, misuse, accident, abuse, neglect, negligence, unauthorized modification, alteration, or repair, use beyond rated capacity, or improper installation, maintenance, application or use, including, without limitation, use in a manner contrary to the accompanying instructions or applicable codes. WARNING: Warranty is void if the battery is allowed to discharge below the minimum battery cutoff point. The battery must be recharged every four (4) to six (6) months when not in use.

If the Battery Cabinet fails to conform with the above warranty within the two year warranty period, Liebert will repair or replace the Battery Cabinet, at Liebert's option. Repairs or replacements are warranted for the remainder of the original warranty period. Purchaser, to make a warranty claim, should call 1-800-222-5877 to obtain a Returned Goods Authorization number and shipping instructions. Return transportation costs to Liebert are the responsibility of the Purchaser.

Liebert Corp

# UPStation GXT™

## 6 & 10 kVA
## Optional Battery Cabinet

### Technical Support

| | |
|---|---|
| Global Services | 1-800-LIEBERT |
| Applications U.S.A. | 1-800-222-5877 |
| Outside the U.S.A. | 614-841-6755 |
| U.K. | +44 (0) 1793 553355 |
| France | +33 (0) 1 43 60 01 77 |
| Germany | +49 89 99 19 220 |
| Italy | +39 2 98250 1 |
| Netherlands | +31 (0) 475 503333 |
| E-mail | upstech@liebert.com |
| Web site | http://www.liebert.com |
| Worldwide FAX tech support | +614-841-5471 |

**The Company Behind The Products**

With more than 500,000 installations around the globe, Liebert is the world leader in computer protection systems. Since its founding in 1965, Liebert has developed a complete range of support and protection systems for sensitive electronics:

- Environmental systems: close-control air conditioning from 1.5 to 60 tons.
- Power conditioning and UPS with power ranges from 250 VA to more than 1000 kVA.
- Integrated systems that provide both environmental and power protection in a single, flexible package.
- Monitoring and control — on-site or remote — from systems of any size or location
- Service and support, through more than 100 service centers around the world, and a 24-hour Customer Response Center.

While every precaution has been taken to ensure accuracy and completeness of this literature, Liebert Corporation assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

©1999 Liebert Corporation All rights reserved throughout the world. Specifications subject to change without notice.

® Liebert and the Liebert logo are registered trademarks of Liebert Corporation. All names referred to are trademarks or registered trademarks of their respective owners.

SLI-23147 (9/99) Rev. 0