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IMPORTANT SAFETY PRECAUTIONS



WARNING

Observe all cautions and warnings in this manual. Failure to do so may result in serious injury or death.

Refer all UPS and battery service to properly trained and qualified service personnel. Do not attempt to service this product yourself.

Opening or removing the cover may expose you to lethal voltages within this unit even when it is apparently not operating and the input wiring is disconnected from the electrical source. Never work alone.

SAVE THESE INSTRUCTIONS

This manual contains important safety instructions that must be followed during the installation and maintenance of the UPS and batteries. Read this manual thoroughly before attempting to install or operate this UPS.

UPS Safety Notes

The UPS contains no user-serviceable parts except the internal battery pack. Do not remove the cover. Removing the cover may result in electric shock and will invalidate any implied warranty.

The UPS has an internal battery, so the output receptacles of the UPS may carry live voltage even if the UPS is not connected to mains input power.

Before moving or rewiring the UPS, disconnect mains input power and the battery and make sure that the UPS is completely shut down. Otherwise, the output terminal may carry live voltage, presenting an electric shock hazard.

To ensure human safety and normal UPS operation, the UPS must be properly grounded before use.

When the UPS is connected to an IT power distribution system, the short-circuit protection device must be installed on the neutral line.

Install and use the UPS in the following environments:

- Temperature: 0°C to 40°C (32-104°F); relative humidity: 0% to 95%)
- Out of direct sunlight
- Away from heat source
- Stable surface, not subject to vibrations or shocks
- Away from dust and other particulates
- Away from corrosive substances, salts and flammable gases

Keep the air inlet and outlet of the UPS unobstructed. Poor ventilation will increase the UPS internal temperature and can shorten the life of the UPS and its batteries.

Keep liquid and other foreign objects away from the UPS.

In case of fire, use a dry chemical fire extinguisher to put out the fire. Using a fluid fire extinguisher may cause electric shock.

This UPS is not intended for use with life support and other designated critical devices. Maximum load must not exceed that shown on the UPS rating label. This UPS is designed for data processing equipment. If uncertain, consult your local dealer or Emerson representative.

Battery Safety



CAUTION

Do not dispose of the battery in a fire. The battery may explode.

Do not open or damage the battery. Released electrolyte is harmful to skin and eyes. If electrolyte comes into contact with the skin, wash the affected area immediately with plenty of clean water and get medical attention.



CAUTION

A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries:

- Remove watches, rings and other metal objects.
- Use tools with insulated handles.
- Wear rubber gloves and boots.
- Do not lay tools or metal parts on top of batteries.
- Disconnect charging source prior to connecting or disconnecting battery terminals.
- Determine if the battery is inadvertently grounded. If it is inadvertently grounded, remove the source of the ground. Contact with any part of a grounded battery can result in electrical shock. The likelihood of such shock will be reduced if grounds are removed during installation and maintenance (applicable to a UPS and a remote battery supply not having a grounded supply circuit).

ELECTROMAGNETIC COMPATIBILITY—The Liebert GXT3 series complies with the limits for a Class A digital device. Operating this device in a residential area is likely to cause harmful interference that users must correct at their own expense.

The Liebert GXT3 series complies with the requirements of EMC Directive 2004/108/EC and the published technical standards. Continued compliance requires installation in accordance with these instructions and use of accessories approved by Emerson.

Information for the Protection of the Environment

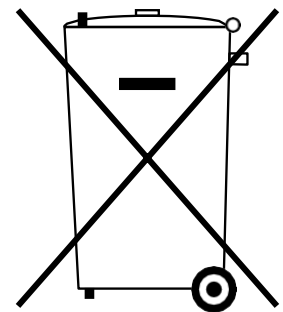
UPS SERVICING—This UPS makes use of components dangerous for the environment (electronic cards, electronic components). The components removed must be taken to specialized collection and disposal centers.

NOTICE TO EUROPEAN UNION CUSTOMERS: DISPOSAL OF OLD APPLIANCES—This product has been supplied from an environmentally aware manufacturer that complies with the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/CE.














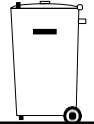
The “crossed-out wheelee bin” symbol at right is placed on this product to encourage you to recycle wherever possible. Please be environmentally responsible and recycle this product through your recycling facility at its end of life. Do not dispose of this product as unsorted municipal waste. Follow local municipal waste ordinances for proper disposal provisions to reduce the environmental impact of waste electrical and electronic equipment (WEEE).

For information regarding the scrapping of this equipment, please browse <http://www.eu.emersonnetworkpower.com> (“Products session” or “Contact us” session) or call our worldwide technical support.

- Toll Free: 00 80011554499
- Toll Number Based in Italy: +39 0298250222



GLOSSARY OF SYMBOLS

	Risk of electrical shock
	Indicates caution followed by important instructions
	AC input
	AC output
	Requests the user to consult the manual
	Indicates the unit contains a valve-regulated lead acid battery
	Recycle
	DC voltage
	Equipment grounding conductor
	Bonded to ground
	AC voltage
	ON/Alarm Silence/Battery Test
	OFF/Bypass
	WEEE

1.0 PRODUCT DESCRIPTION

The Liebert GXT3 is a compact, online uninterruptible power system (UPS) that continuously conditions and regulates its output voltage. The Liebert GXT3 is designed to supply microcomputers and other sensitive electronic equipment with clean sine wave input power, 700VA to 3000VA at 230V.

Upon generation, AC power is clean and stable. However, during transmission and distribution it is subject to voltage sags, spikes and complete failure that may interrupt computer operations, cause data loss and damage equipment.

The Liebert GXT3 protects equipment from these disturbances. The Liebert GXT3 continuously charges its batteries from the mains, enabling it to supply power to connected loads, even when the mains fail.

This section describes the UPS, its features, models, appearance and components, operating principles and operating mode.

1.1 Features

The UPS includes the following features:

- Intelligent battery management to extend the battery life
- Operation and display panel with LED for monitoring load percentage and battery capacity independently
- Flexible network management with Liebert MultiLink™ software
- Fan fault self-inspection and automated diagnostic function
- Intelligent fan operation, automatically changing rotation speed depending on system requirements, to decrease power consumption and noise
- Input circuit breaker to ease recovery from overloads
- CE mark and safety approval from CE
- Communication options: USB port, Liebert IntelliSlot® port and terminal block communication
- Dry contacts for remote monitoring
- Input power factor greater than 0.99
- Output voltage selection function

1.2 Available Models

Available models of the UPS are shown in **Table 1**:

Table 1 UPS models, power ratings

Model	Nominal Power Rating
GXT3-700RT230	700VA/630W
GXT3-1000RT230	1000VA/900W
GXT3-1500RT230	1500VA/1350W
GXT3-2000RT230	2000VA/1800W
GXT3-3000RT230	3000VA/2700W

1.3 Appearance and Components

1.3.1 Appearance

The Liebert GXT3 rack/tower models in various power ratings have the same general appearance, controls and features (see **Figure 1**). The various rack/tower models differ largely in the type of receptacles each has.

Figure 1 Liebert GXT3-700RT230 - GXT3-3000RT230 UPS



1.3.2 Rear Panel Features

The rear panel of the Liebert GXT3 has these features:

- USB port
- Cooling fan
- C19 output receptacle (GXT3-3000RT230 only)
- Six C13 output receptacles
- Input circuit breaker
- Liebert IntelliSlot
- Communication terminal block
- Input receptacle

Figure 2 Rear panel components, Liebert GXT3 230V 700VA, 1000VA and 1500VA models

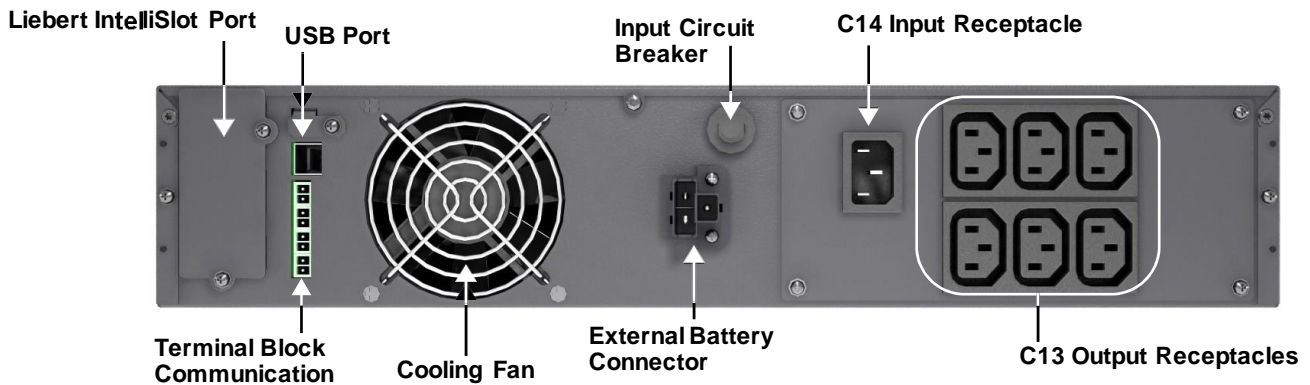


Figure 3 Rear panel components, Liebert GXT3 230V 2000VA models

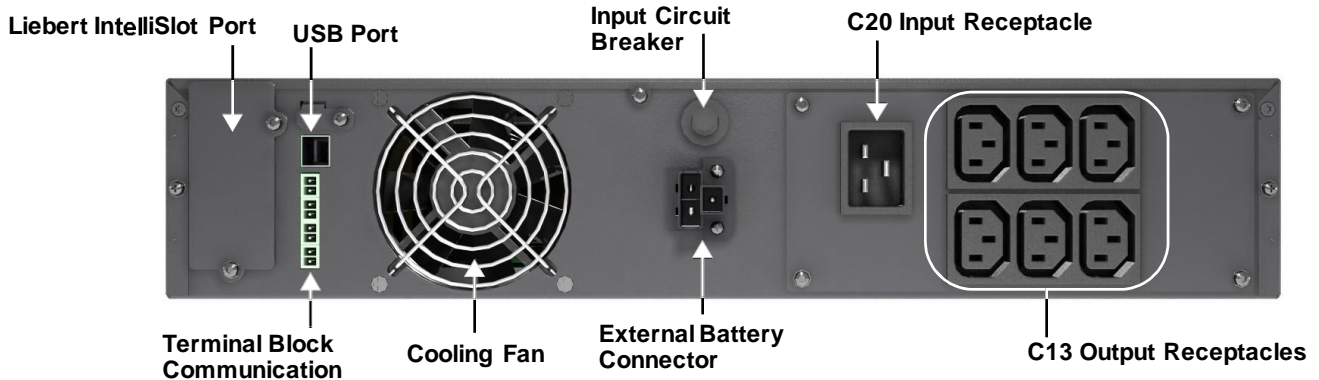
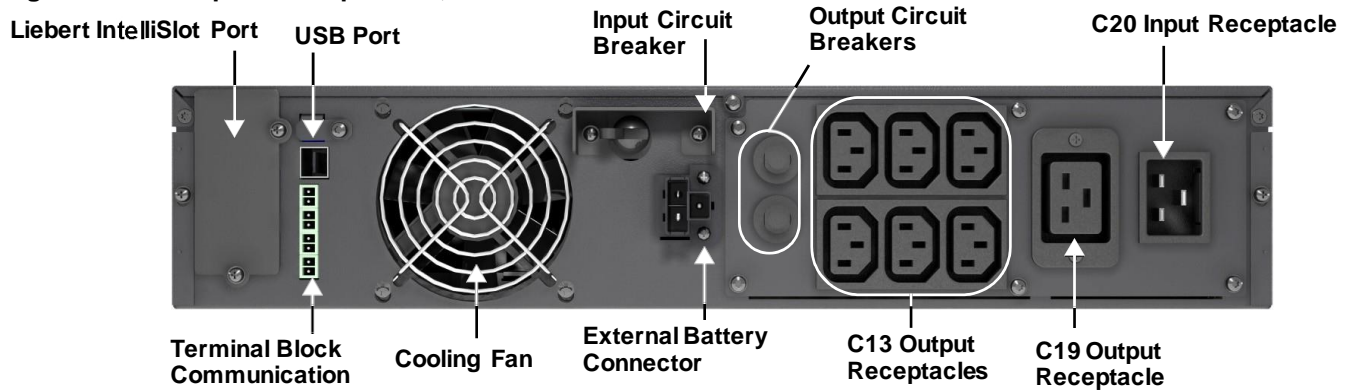


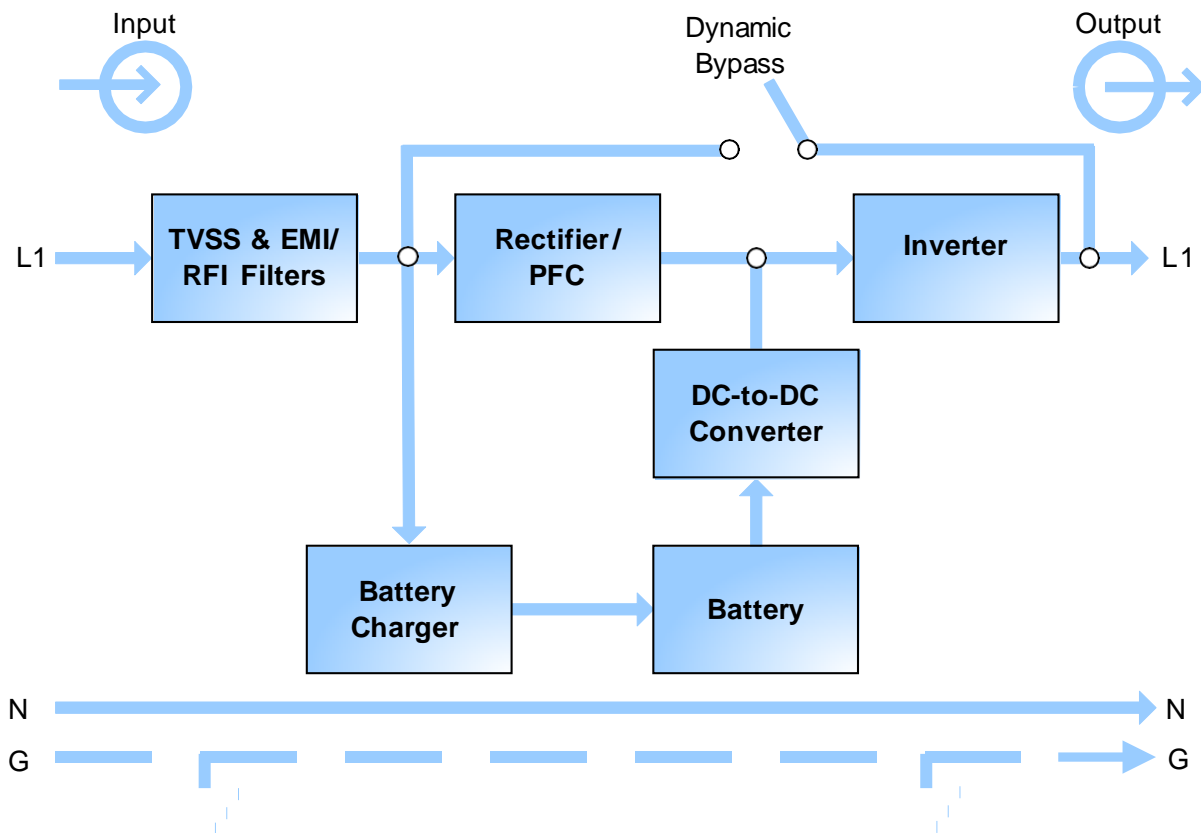
Figure 4 Rear panel components, Liebert GXT3 230V 3000VA models



1.4 Major Components

The operating principle of the UPS is shown in Figure 5.

Figure 5 Operating principle diagram



The UPS is composed of mains input, TVSS and EMI/RFI filters, rectifier/PFC, inverter, battery charger, DC-to-DC converter, battery, dynamic bypass and UPS output.

Transient Voltage Surge Suppression (TVSS) and EMI/RFI Filters

The Liebert GXT3 has surge protection and filters that protect the connected load from power surges and sags, electromagnetic interference (EMI) and radio frequency interference (RFI). These features can minimize any surges or interference present in the mains power. The filters also prevent surges or interference generated by the UPS from adversely affecting other devices connected on the same branch as the UPS.

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