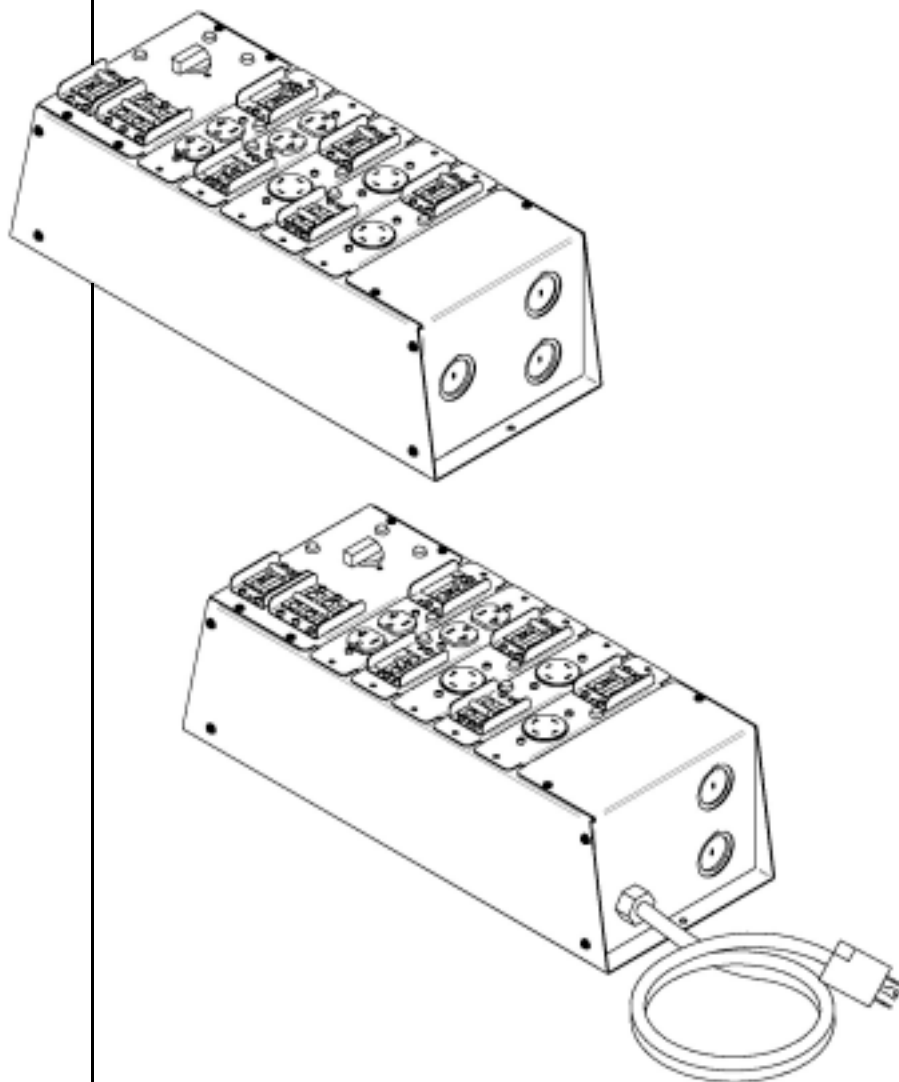


# UPStation GXT™ 6kVA Maintenance Bypass

## USER MANUAL



*Transformerless  
with Configurable  
Output Distribution*



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# IMPORTANT SAFETY INSTRUCTIONS

## SAVE THESE INSTRUCTIONS

This manual contains important instructions that should be closely followed during installation and maintenance of this UPStation GXT 6kVA Maintenance Bypass.

This product is designed for commercial / industrial use only. This product is not intended for use with life support and other designated "critical" devices. Maximum load must not exceed that shown on the Maintenance Bypass Cabinet rating label.



## WARNING

**LETHAL VOLTAGES MAY BE PRESENT WITHIN THIS UNIT EVEN WHEN IT IS APPARENTLY NOT OPERATING. OBSERVE ALL CAUTIONS AND WARNINGS IN THIS MANUAL. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH. NEVER WORK ALONE.**

The UPStation GXT 6 kVA Maintenance Bypass is designed for use on properly grounded (earthed) 208/240VAC 60Hz supply, for installation by qualified personnel. This UPS equipment is intended to be installed by a qualified / certified electrician who must review and approve customer supplied wiring, circuit breakers, intended loads and verify correct input, output and grounded (earth) connections to ensure compliance with technical standards and national and local electrical codes. Installation instructions and warning notices are in the **Cable Installation** section of this manual beginning on page 6.



## CAUTION

**To reduce the risks of fire, connect only to a circuit provided with maximum branch circuit overcurrent protection of 40A in accordance with applicable national and local electrical codes.**

Install the bypass equipment in a clean environment, free of conductive contaminants, moisture, flammable liquids, gases, and corrosive substances.

## GLOSSARY OF SYMBOLS



**Risk of electrical shock**



**Indicates Warning or Caution followed by important instructions**



**Requests the user to consult the manual**



**Equipment grounding conductor**



**On**



**Off**

## GENERAL DESCRIPTION

Congratulations on your purchase of Liebert's UPStation GXT 6 kVA Maintenance Bypass. As with every Liebert product, we stand behind our quality. If you have any questions concerning this Maintenance Bypass, please feel free to contact your local sales representative, or call the appropriate Technical Support number listed on the back of this manual.

To ensure proper installation and operation of this unit, please read this manual thoroughly.

While installation must be completed by a qualified / certified electrician, general operation may be performed without special training.

### SYSTEM DESCRIPTION

The Liebert UPStation GXT 6 kVA Maintenance Bypass is intended for use with the UPStation GXT 6 kVA UPS. Typical applications include supporting workstations, servers, network, telecom or other sensitive electronic equipment.

The UPStation GXT 6 kVA Maintenance Bypass was designed to provide maximum system availability to business-critical equipment. The bypass allows for transfer of connected loads to an alternate power path, allowing full isolation of the UPS. After connected loads are switched to alternate power and the UPS is isolated, the UPS can be turned off and removed from service with no interruption of power to connected loads.

The Configurable Output Distribution was designed to provide maximum flexibility to business-critical equipment.

Various output receptacle options are available from 15 A to 30 A. Hardwire options are also available with a branch rated circuit breaker.



#### NOTE

*The 120V loads need to be balanced on the UPS output. To do this, when connecting 120V equipment to the Maintenance Bypass (MB), start at one end of the MB and fill in toward the other end.*

### Features

- Supports up to 30A loads
- Compact design
- Highly configurable
- Multiple power path indicators
- High-speed, break-before-make transfer switch

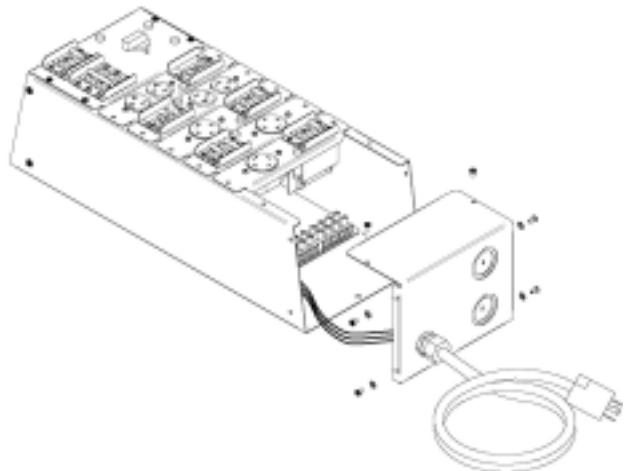
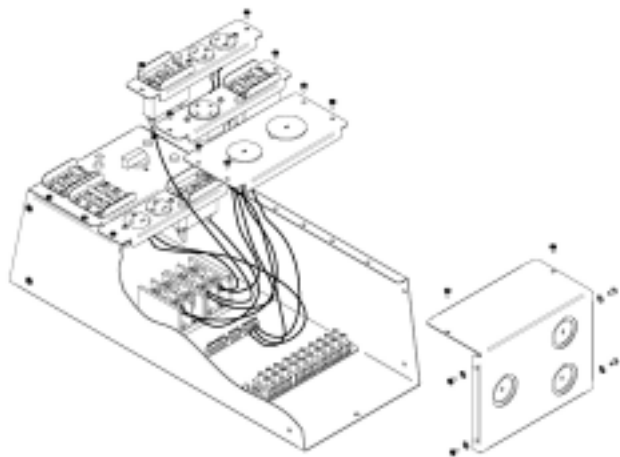
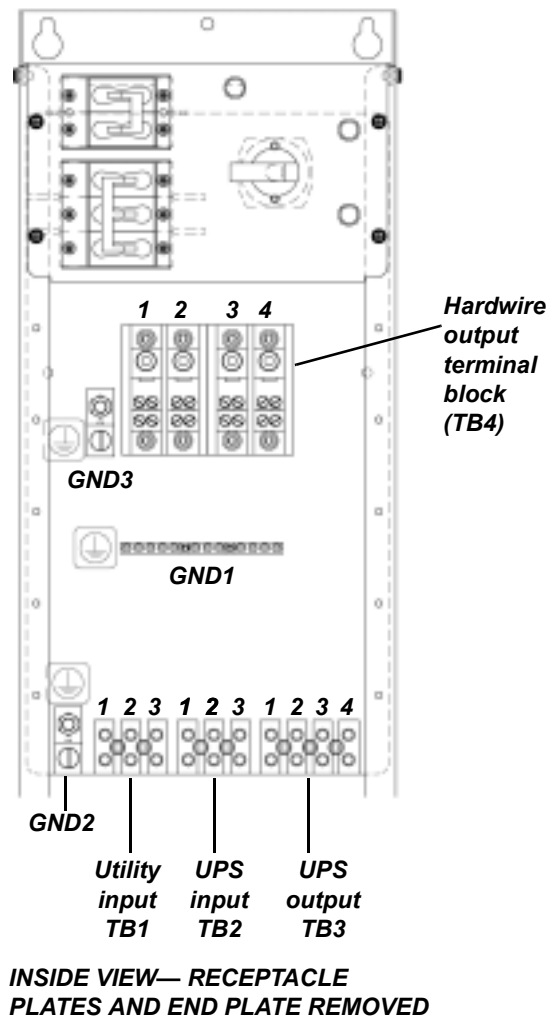
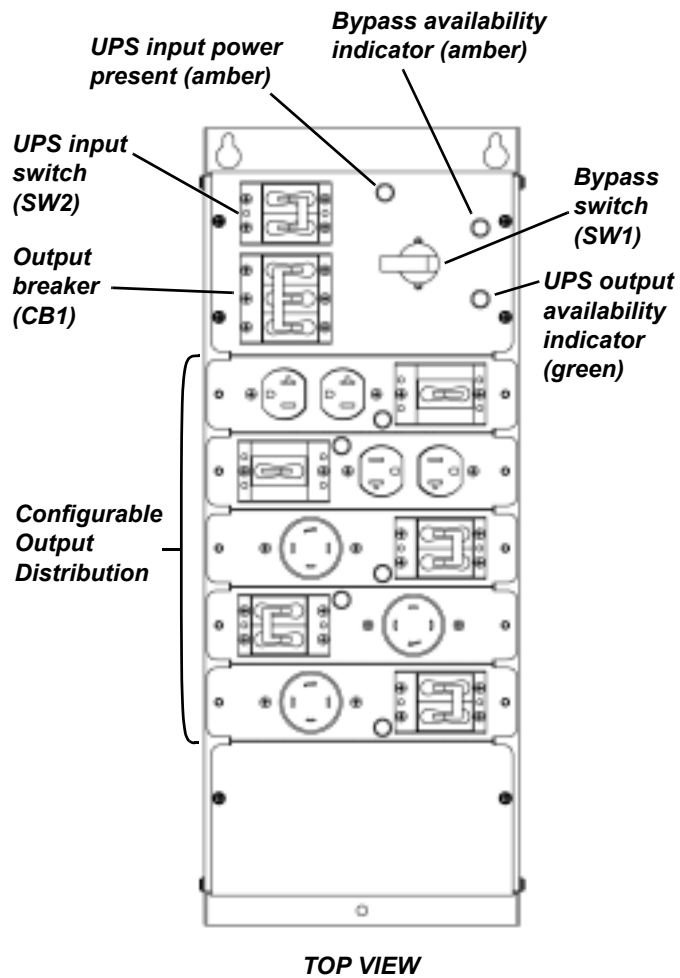
### Standard Components

- Provisions for hardwire output
- Power indicator lamps
- Branch rated circuit breakers
- Easily accessible terminal blocks

### Options

- Field-installable output distribution kits

**Maintenance Bypass component layout**





# MAJOR COMPONENTS

The following is a general description of each component and its functions. Please review this section carefully, as it will give you a better understanding as to how the UPStation GXT 6 kVA Maintenance Bypass operates.

## **BYPASS SWITCH**

The Bypass Switch allows easy and rapid transfer of connected loads between the UPS and bypass source.

## **CONFIGURABLE OUTPUT DISTRIBUTION**

Several receptacle and hardwire options are available as user-selectable output distribution. These are factory-configured when ordered and also allow for field upgrades. Common receptacle and hardwire options include:

### **15 Amp Options**

5-15R2

L5-15R2

6-15R2-208

6-15R2-240

L6-15R2-208

L6-15R2-240

15A, 120V, 1 Pole Breaker for 1/2" & 3/4" conduit

15A, 208V, 2 Pole Breaker for 1/2" & 3/4" conduit

15A, 240V, 2 Pole Breaker for 1/2" & 3/4" conduit

### **20 Amp Options**

5-20R2 (T-Slot)

L5-20R

L6-20R-208

L6-20R-240

L14-20R-240

20A, 120V, 1 Pole Breaker for 1/2" & 3/4" conduit

20A, 208V, 2 Pole Breaker for 1/2" & 3/4" conduit

20A, 240V, 2 Pole Breaker for 1/2" & 3/4" conduit

### **30 Amp Options**

L5-30R

L6-30R-208

L6-30R-240

L14-30R-240

30A, 120V, 1 Pole Breaker for 1/2" & 3/4" conduit

30A, 208V, 2 Pole Breaker for 1/2" & 3/4" conduit

30A, 240V, 2 Pole Breaker for 1/2" & 3/4" conduit

### **Other Options**

Single Position Blanking Plate

Hardwire Options

Single Position Plate with 1/2", 3/4" and 1" conduit knockouts

Double Position Plate with 1-3/4" and 2" conduit knockouts

# CABLE INSTALLATION

## WIRING PREPARATION



### CAUTION

Please read this section thoroughly before attempting to install wiring to this unit. Be sure that the unit is not connected to any AC mains power source or UPS before installing any wiring to this unit. This should be installed by a qualified/certified electrician.

For access to terminal blocks, see diagrams on page 4.



#### NOTE

*The 120V loads need to be balanced on the UPS output. To do this, when connecting 120V equipment to the Maintenance Bypass, start at one end of the output modules and fill in toward the other end. Load balancing must be performed with the UPStation GXT6000T - 208X and 240X. It is not required on the GXT6000T-208 because the unit has no 120V output.*

## POWER CABLE INSTALLATION

Refer to the chart below when selecting cables:

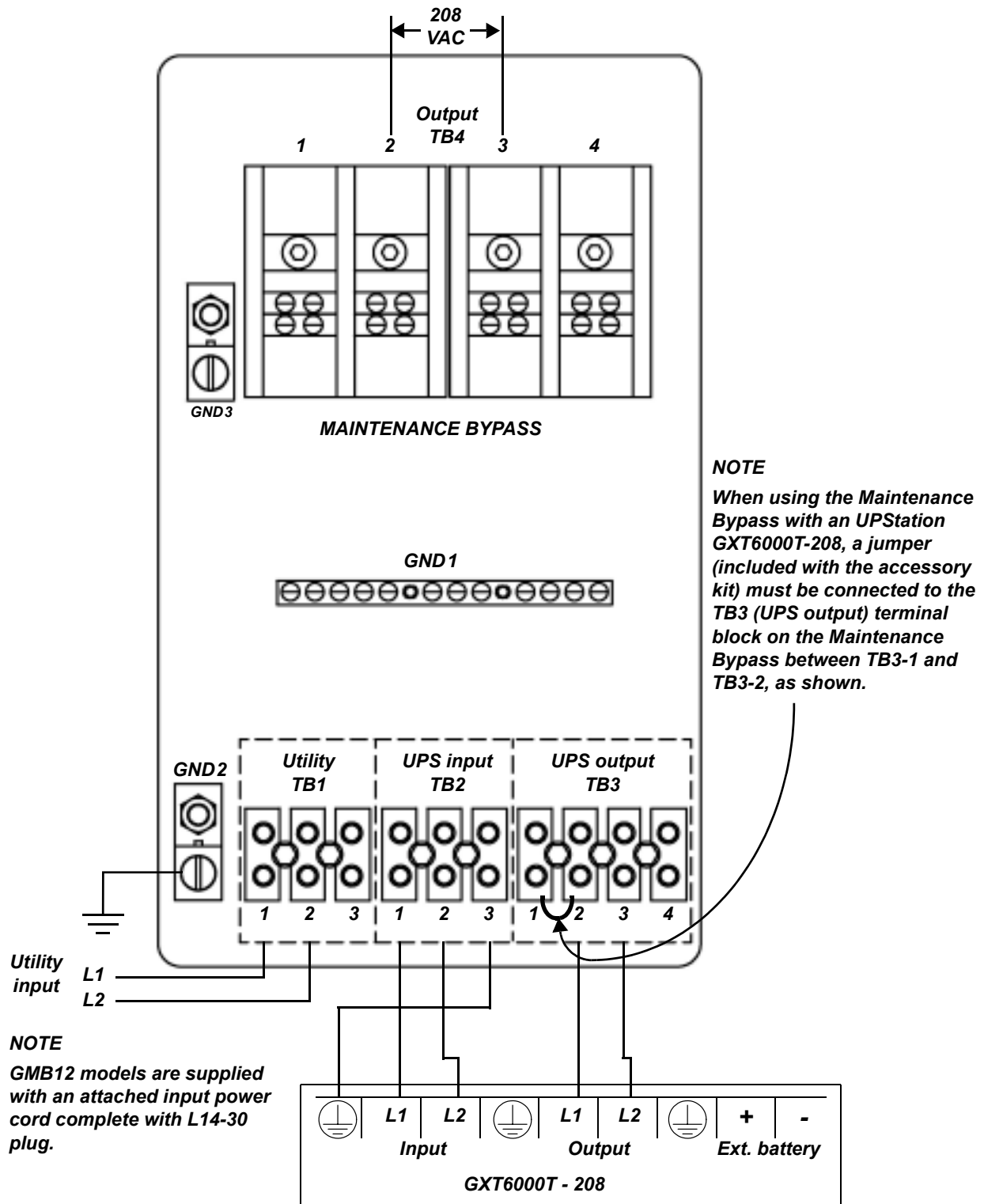
Power Cable and Protection Ratings		
	208V	240V
Max Input Current	30 A	30 A
Input Protection	40 A	40 A
Max Output Current	30 A	30 A
Terminal Block Details	Max: 16 mm <sup>2</sup> (6 AWG) Min: 2.5 mm <sup>2</sup> (14 AWG) Torque: 2 Nm (16 in/lb)	



#### NOTE

*Customer must supply power cables between Maintenance Bypass and UPS, utility and load. (GMB12 models are supplied with an attached input power cord complete with L14-30 plug.)*

## Connecting Maintenance Bypass to UPStation GXT6000T - 208



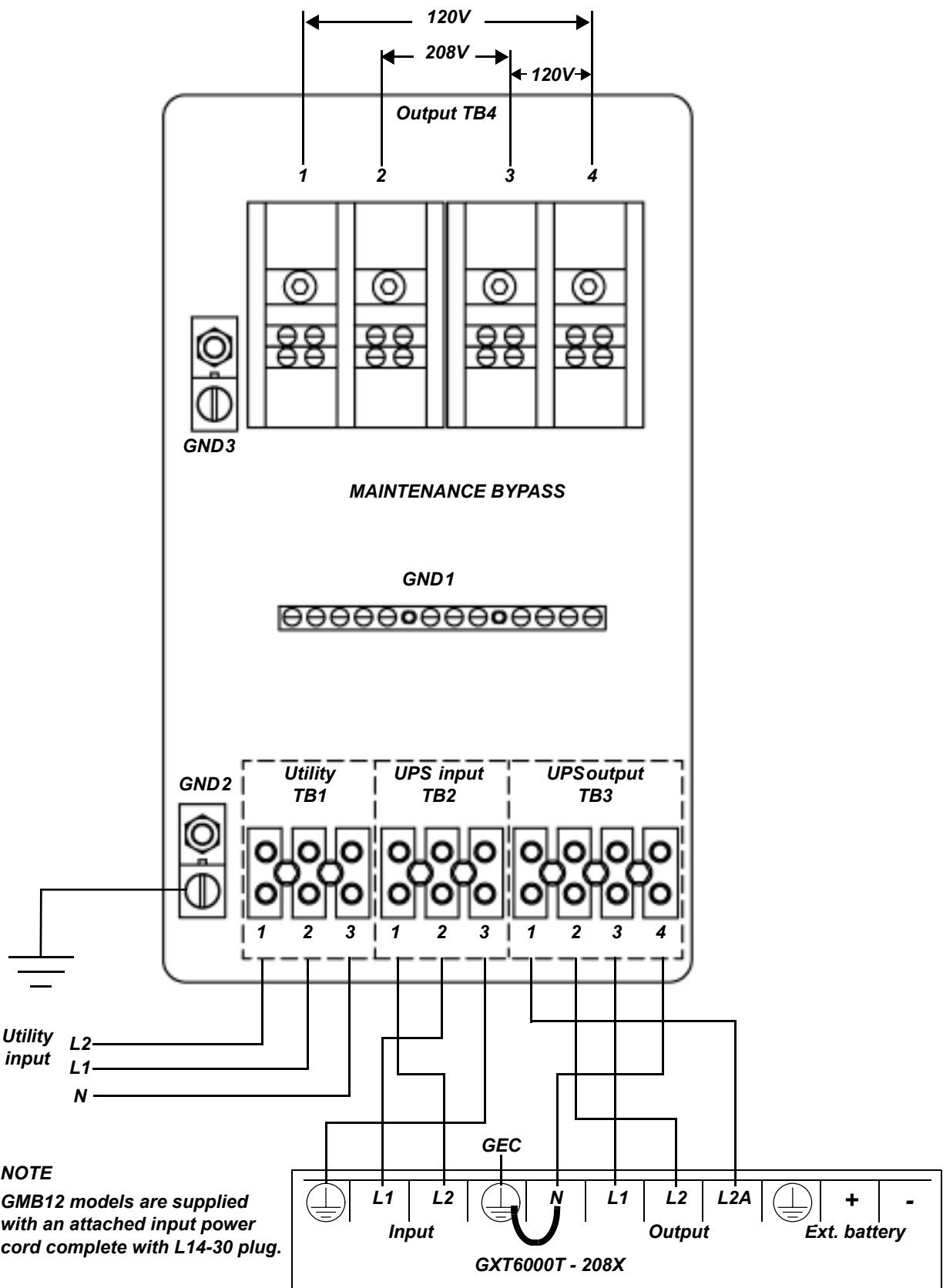
**NOTE**

When using the Maintenance Bypass with an UPStation GXT6000T-208, a jumper (included with the accessory kit) must be connected to the TB3 (UPS output) terminal block on the Maintenance Bypass between TB3-1 and TB3-2, as shown.

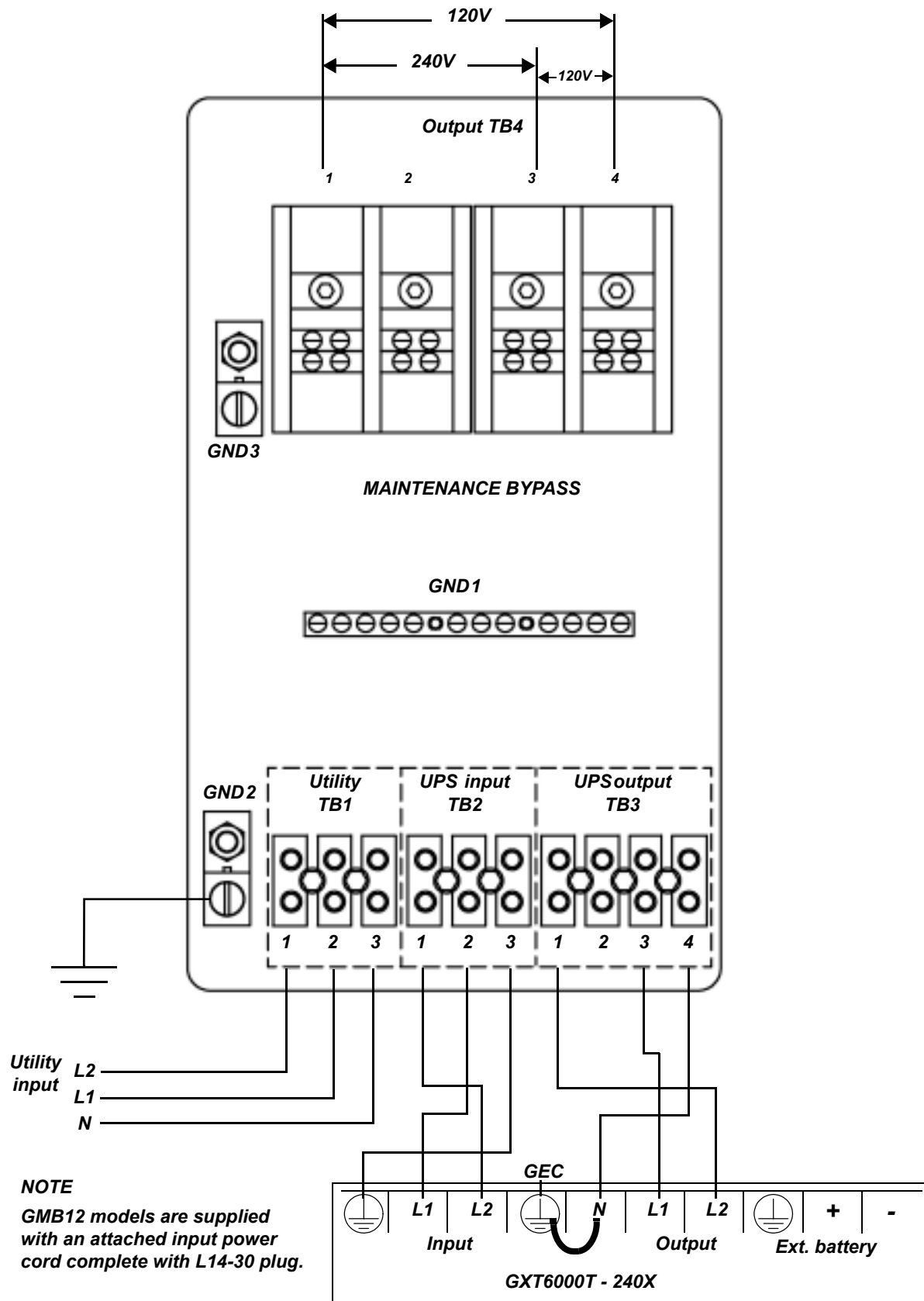
**NOTE**

GMB12 models are supplied with an attached input power cord complete with L14-30 plug.

# Connecting Maintenance Bypass to UPStation GXT6000T - 208X



# Connecting Maintenance Bypass to UPStation GXT6000T - 240X

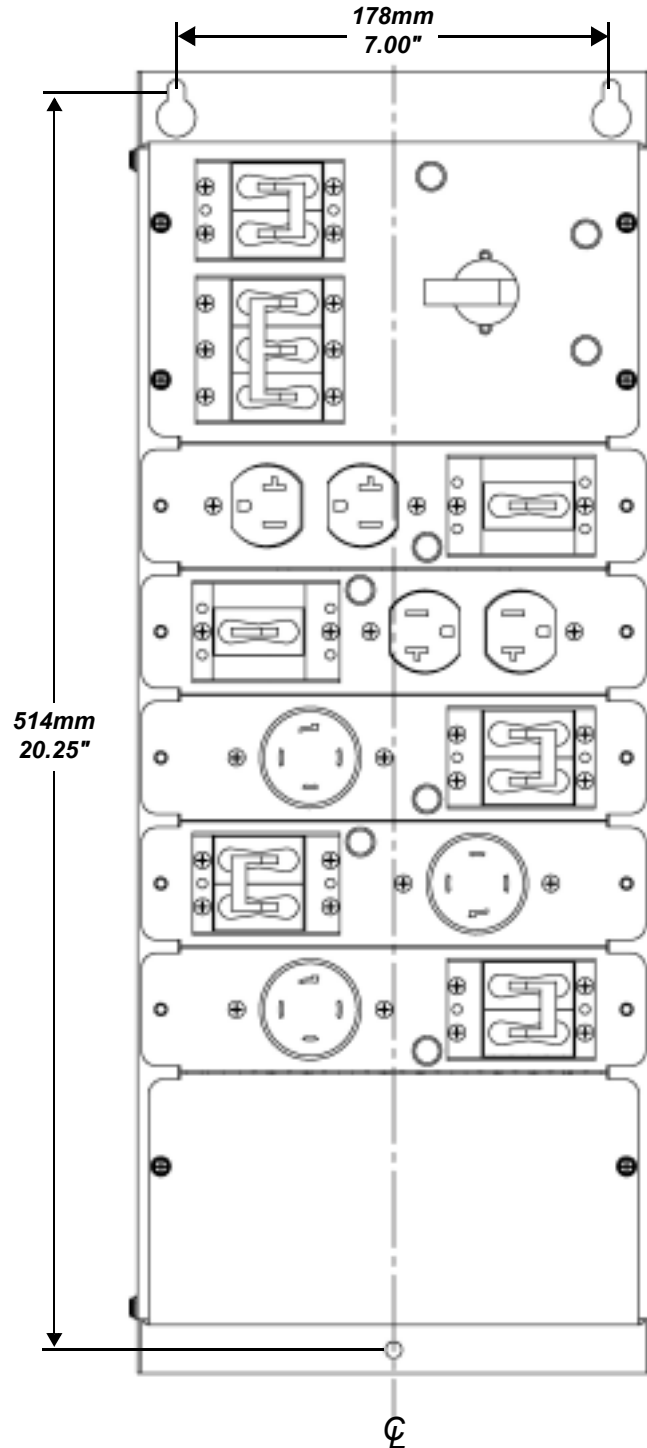


**NOTE**  
 GMB12 models are supplied with an attached input power cord complete with L14-30 plug.

# WALL-MOUNT DIAGRAM

## DIAGRAM FOR ATTACHING UNIT TO WALL

Use the following diagram, which shows the location and measurements of factory-cut mounting slots, when preparing to attach the GXT Maintenance Bypass to a wall. Liebert recommends using 1/4-20 mounting screws. Rubber pads are supplied for placing the Maintenance Bypass on the floor.



## HARDWIRE OUTPUT OPTION

This product is intended to be installed by a qualified electrician only.

1. COMPLETELY REMOVE ALL POWER FROM THE FRAME. If the Maintenance Bypass is connected to the UPS, disconnect external battery supply.
2. Remove the end cover plate to access the terminal block (see **Accessing terminal block** below).
3. Without disconnecting from the terminal block, unscrew and pull out the hardwire plate(s).
4. Route all wires from the hardwire plate(s) to the terminal block.
5. Connect the GROUND wire to the grounding bar strip (GND1).

6. Connect the remaining wires in accordance with the wiring diagram (located inside the base enclosure).

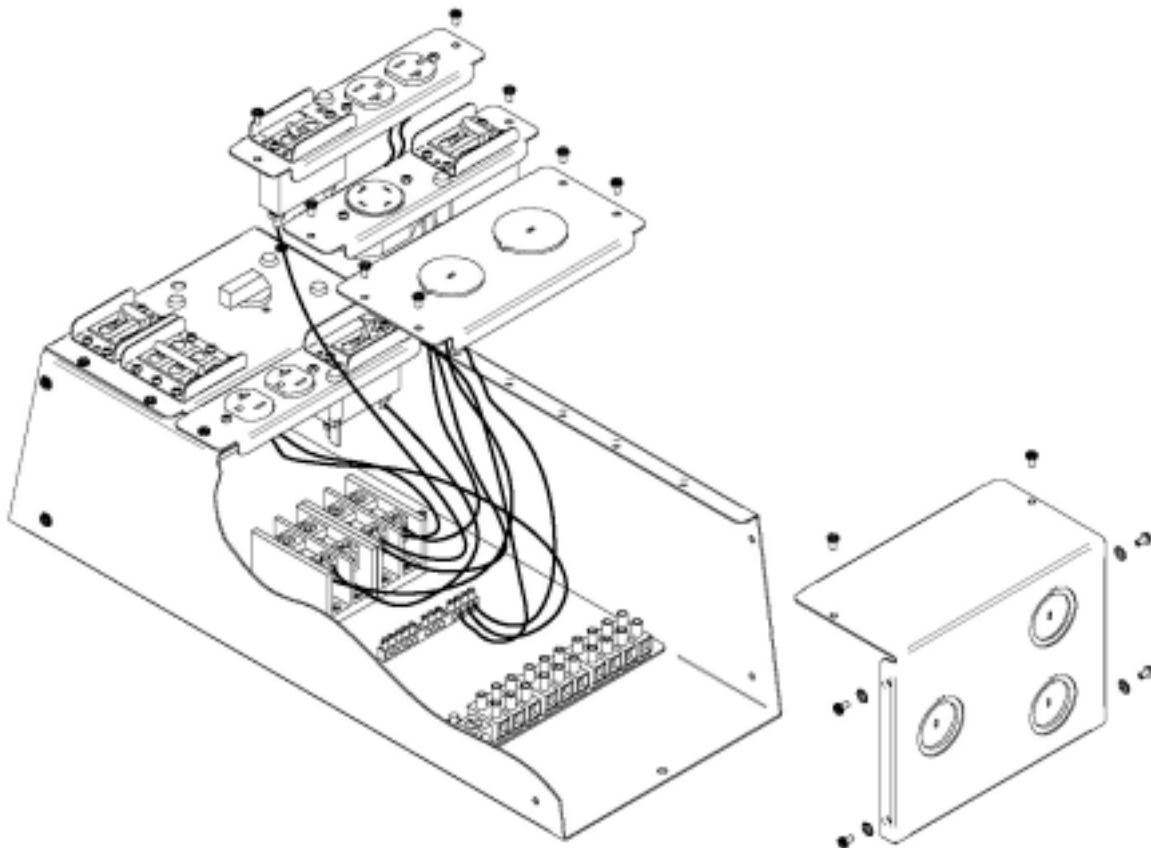


### NOTE

*When wiring 120 V loads, LINE must be alternated between TB4-1 and TB4-3 to balance the 120V load. Connect all neutral wires to TB4-4.*

7. Replace the receptacle plates and the end cover plate, using care to not damage the wires.

### Accessing terminal block



# OPERATING PROCEDURES

## START-UP AND INITIALIZATION

Follow these steps in order to start up the GXT 6kVA UPS while connected to the Maintenance Bypass.

### ON MAINTENANCE BYPASS

1. Set the Maintenance Bypass switch (SW1) to UPS position.
2. Close (position I) UPS Input switch (SW2).
3. Close (position I) Output Circuit breaker (CB1).

### ON UPS

1. Close (position I) battery circuit breaker.
2. Close (position I) input circuit breaker.
3. Close (position I) output circuit breaker.
4. After the start-up sequence the UPS will automatically default to its internal bypass. The bypass LED will be lit.
5. Press UPS On/Alarm/Battery Test button for at least one second to turn the UPS on. The UPS ON LED will be lit.
6. Connected equipment may now be switched on.

## SHUTTING DOWN THE UPS

Use the following procedure to power down the system.

### ON UPS

1. Press Output OFF/Bypass button for at least 1 second, twice, within 4 seconds.
2. Open (position O) UPS output, input and battery circuit breakers.

### ON MAINTENANCE BYPASS

1. Open (position O) output breaker (CB1).
2. Open (position O) UPS input switch (SW2).

## TRANSFERRING SYSTEM FROM UPS TO MAINTENANCE BYPASS OPERATION

1. On UPS verify that Bypass LED is lit, if not, press UPS OFF/Bypass button for at least one second.
2. On Maintenance Bypass verify that the Bypass lamp is illuminated.
3. Rotate Bypass switch SW1 to the Bypass position.
4. Set UPS Input switch SW2 to the Off position (position O). This will remove power from UPS input.



### CAUTION

The connected load is now powered by the bypass source and is not protected.

## TRANSFERRING SYSTEM FROM MAINTENANCE BYPASS TO UPS OPERATION

1. On Maintenance Bypass close (position I) UPS Input switch (SW2).
2. On UPS close (position I) input, output and battery circuit breakers.
3. After the start-up sequence the UPS will automatically default to its internal bypass. The bypass LED will be lit.
4. Press UPS ON/Alarm/Battery Test button for at least one second to turn the UPS on. The UPS ON LED will be lit.
5. On Maintenance Bypass verify that UPS Output LED is illuminated.
6. Rotate Bypass switch SW1 to the UPS position.



## SPECIFICATIONS

Typical Transfer Time (to or from maintenance bypass)	< 6 milliseconds
Input Voltage	Nominal 208VAC or 240VAC
Total Current	30A max.
Operating Ambient Temperature	0° to +40° C
Storage Ambient Temperature	-20° to +60° C
Dimensions, W x D x H, in (mm)	8.2 x 21.0 x 6.2 (209 x 534 x 158)
Chassis Weight (no receptacles)	10 lbs.
Distribution Module Weights (each)	2 lbs.
Connections to UPS	Hardwire Terminal Blocks
Humidity	0 to 95%, non-condensing
Agency/Standards	UL 1778, c-UL





# **UPStation GXT 6kVA Maintenance Bypass**

## **USER MANUAL**

### **The Company Behind the Products**

With over a million 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 to 60 tons
- Power conditioning and UPS with power ranges from 300 VA to more than 1000 kVA
- Integrated systems that provide both environmental and power protection in a single, flexible package
- Monitoring and control—from systems of any size or location, on-site or remote
- Service and support through more than 100 service centers around the world and a 24/7 Customer Response Center

While every precaution has been taken to ensure the 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.

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[monitoring@liebert.com](mailto:monitoring@liebert.com)

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[upstech@liebert.com](mailto:upstech@liebert.com)

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