

# MIDDLE ATLANTIC®

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**NEXSYS™**

## Online UPS User Manual

100-00092 Rev A





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# IMPORTANT SAFETY INSTRUCTIONS - EN

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the UPS and batteries.

When installing an Online UPS Expandable Runtime Battery (UPX-EXPANRUN-OL), refer to the [Online UPS Expandable Runtime Battery User Manual \(100-00095\)](#).

- Only use attachments and accessories specified by the manufacturer.
- Read all instructions before using the product.

## Understanding Safety Symbols



### **DANGER HAZARDOUS VOLTAGE**

The lightning flash with the arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



### **WARNING**

A warning alerts you to a situation that could result in serious personal injury or death.



### **CAUTION**

A caution alerts you to a situation that may result in minor personal injury or damage to the product and/or property.



### **WARNING**

To reduce the risk of fire, only connect the 1000VA, 1500VA, 2000VA, or 3000VA UPS model to a circuit provided with 15A, 20A, or 30A maximum branch circuit overcurrent protection, respectively, in accordance with the National Electrical Code, ANSI/NFPA 70 and the Canadian Electrical Code, Part I, C22.1.



### **WARNING**

Risk of energy hazard maximum 72 V, 9 ampere hour battery (model dependent). Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.




### **WARNING**


Risk of electric shock when remotely controlling the unit while it is being serviced. Verify that the unit is in normal operating conditions before remotely controlling it.




### **CAUTION**

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.**

 **CAUTION** The battery can power hazardous components inside the unit, even when the AC input power is disconnected.

 **CAUTION** Do not dispose of batteries in a fire. The batteries may explode.

 **CAUTION** Do not open or mutilate batteries. Released material is harmful to the skin and eyes and may be toxic.

- Only use the power supply cord shipped with the unit.
- Ambient operating temperature: 104 °F (40°C) max.
- There are no user-serviceable parts inside the unit.
- Only replace with the same number of sealed lead acid batteries that correspond with your particular UPS model as specified on the following table.

UPS Models	Replacement Battery Model	Total Voltage
UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RPLBATT-E	24V
UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RPLBATT-F	48V
UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RPLBATT-C	48V
UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6	UPX-RPLBATT-G	72V

- Transport the unit only in the original package to protect against shock and impact.
- The unit must be stored in a ventilated and dry room.
- Only connect the unit to a grounded, shockproof outlet, which must be easily accessible after installation and located close to the system.

## INSTRUCTIONS IMPORTANTES SUR LA SÉCURITÉ - FR

CONSERVER CES INSTRUCTIONS - Ce manuel contient des instructions importantes qui doivent être suivies lors de l'installation et de la maintenance de l'onduleur et des batteries.

Lors de l'installation Online UPS Expandable Runtime Battery (UPX-EXPANRUN-OL), reportez-vous au [Online UPS Expandable Runtime Battery User Manual \(100-00095\)](#).

- Utiliser uniquement les accessoires spécifiés par le fabricant.
- Lisez toutes les instructions avant d'utiliser le produit.

## Comprendre Les Symboles De Sécurité

**DANGER  
TENSION  
DANGEREUSE**

Le symbole de la pointe de flèche, dans un triangle équilatéral, est destiné à alerter l'utilisateur sur la présence de tension dangereuse non isolée dans l'enceinte du produit qui peut être d'une ampleur suffisante pour constituer un risque d'électrocution.

**AVERTISSEMENT**

Un avertissement vous avertit d'une situation pouvant entraîner des blessures graves ou la mort.

**ATTENTION**

Une attention vous avertit d'une situation pouvant entraîner des blessures mineures ou des dommages au produit et/ou à la propriété.

**AVERTISSEMENT**

Pour réduire le risque d'incendie, raccordez uniquement le modèle d'onduleur 1000VA, 1500VA, 2000VA, ou 3000VA à un circuit équipé d'une protection contre les surintensités de circuit de dérivation 15A, 20A, ou 30A, respectivement, conformément au Code national de l'électricité, à la norme ANSI/NFPA 70 et au Code canadien de l'électricité. Partie I, C22.1.

**AVERTISSEMENT**

Risque de danger énergétique maximum 72V, batterie de 9 ampères heures (dépendant du modèle). Avant de remplacer les piles, retirez les bijoux conducteurs tels que les chaînes, les montres-bracelets et les bagues. Une énergie élevée à travers les matériaux conducteurs pourrait provoquer de graves brûlures.

**AVERTISSEMENT**

Risque de choc électrique lors du contrôle à distance de l'unité pendant sa maintenance. Vérifier que l'unité fonctionne normalement avant de le contrôler à distance.

**ATTENTION**

**RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UN TYPE INCORRECT.**

**ATTENTION**

La batterie peut alimenter des composants dangereux à l'intérieur de l'unité, même lorsque l'alimentation d'entrée CA est déconnectée.

**ATTENTION**

Ne vous débarrassez pas des piles dans un incendie. Les piles peuvent exploser.

**ATTENTION**

Ne pas ouvrir ou mutiler les piles. Les matières libérées sont nocives pour la peau et les yeux et peuvent être toxiques.

- Utilisez uniquement le cordon d'alimentation fourni avec l'appareil.
- Température de fonctionnement ambiante: 104 °F (40 °C) max.
- Il n'y a pas de pièces utilisables par l'utilisateur à l'intérieur de l'unité.
- Remplacer uniquement par le même nombre de batteries au plomb scellées qui correspondent à votre modèle d'onduleur particulier, comme indiqué dans le tableau suivant.

Modèles D'onduleurs	Modèle de Batterie de Remplacement	Tension Totale
UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RPLBATT-E	24V
UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RPLBATT-F	48V
UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RPLBATT-C	48V
UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6	UPX-RPLBATT-G	72V

- Transporter l'unité uniquement dans l'emballage d'origine pour protéger contre les chocs.
- L'unité doit être stocké dans une pièce ventilée et sèche.
- Ne raccordez l'appareil qu'à une prise antichoc mise à la terre, qui doit être facilement accessible après l'installation et située à proximité du système.

## Regulatory Compliance

### Federal Communications Commission (FCC) Statement



**CAUTION**

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

**NOTE**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Conformité Réglementaire

Déclaration de conformité de la Federal Communications Commission (FCC)

**ATTENTION**

Les changements ou modifications non expressément approuvés par le fabricant peuvent annuler le droit de l'utilisateur à utiliser l'équipement.

Cet appareil est conforme à la partie 15 des règlements de la FCC. Le fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne doit pas causer d'interférences nuisibles.
2. Cet appareil doit accepter toute interférence reçue, y compris les interférences susceptibles de provoquer un fonctionnement indésirable.

**REMARQUE**

Cet équipement a été testé et jugé conforme aux limites de la classe A des appareils numériques, conformément à la section 15 de la réglementation de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles lorsque l'équipement est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence et, si non installé et utilisé conformément au manuel d'instruction, peut provoquer des interférences dans les communications radio. Le fonctionnement de cet équipement dans une zone résidentielle est susceptible de provoquer des interférences nuisibles, auquel cas l'utilisateur sera tenu de corriger les interférences à ses propres frais.

## Industry Canada (IC)

ICES-003 Class A Notice. This Class A digital apparatus complies with Canadian ICES-003.

## Industrie Canada (IC)

ICES-003 Avis NMB-003, Classe A. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

## Waste Electrical and Electronic Equipment (WEEE) Directive



Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office or your household waste collection service.

## Directive sur les déchets d'équipements électriques et électroniques (WEEE)



Élimination correcte de ce produit: Ce symbole indique que ce produit ne doit pas être éliminé avec les ordures ménagères, conformément à la directive WEEE (2012/19/EU) et à votre législation nationale. Ce produit doit être déposé dans un centre de collecte agréé pour le recyclage des déchets d'équipements électriques et électroniques (EEE). La mauvaise manipulation de ce type de déchets pourrait avoir un impact négatif possible sur l'environnement et la santé humaine en raison de substances potentiellement dangereuses généralement associées aux EEE. Dans le même temps, votre coopération dans l'élimination correcte de ce produit contribuera à une utilisation efficace des ressources naturelles. Pour plus d'informations sur les lieux de recyclage de vos équipements usagés, veuillez contacter votre mairie ou votre service de collecte des ordures ménagères.

# Understanding General Symbols and Terms



**NOTE**

A note highlights procedures pertaining to the installation, operation, or maintenance of the product.



**REMINDER**

A reminder marks information which may be of importance to you for recalling in context and later use.



**TIP**

A tip helps users apply techniques and procedures for their specific needs. The information suggests alternative methods that may not be obvious and help users understand the benefits and capabilities of the product. A tip is not essential to the basic understanding of the material.

# Supplied Components and Hardware

After carefully opening all product packaging, identify the supplied components and hardware shown. If any pieces are missing or damaged, please report it immediately to Technical Support at [av.middleatlantic.techsupport@legrand.com](mailto:av.middleatlantic.techsupport@legrand.com) or (866) 977-3901. Keep the original packaging in a safe place for future use.



1, 1.5, 2, or 3KVA UPS Unit

**NOTE:** The 2KVA model shown. Rails pre-installed on unit.

**A**



Power Cord Retainer

**B**

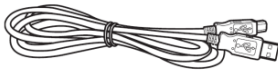


Power Cord

**NOTE:**

- C13 to 5-15P, SignalSAFE™ for 1 and 1.5KVA units.
- C19 to 5-20P, SignalSAFE™ for 2KVA units.
- Not provided for 3KVA units, which have a fixed 10' (3.05M) cable to an L5-30P plug.

**C**



72" (1830 mm) USB-B to USB-A Cable

**D**



RS-232 Cable

**E**



(3x)  
Terminal Block Plug  
(Pre-installed on UPS for EPO and Dry Contacts)

**F**



User Manual



**NOTE**

To order more hardware, contact support at [av.middleatlantic.techsupport@legrand.com](mailto:av.middleatlantic.techsupport@legrand.com) or (866) 977-3901

# Required Tools

- #2 Phillips Screwdriver
- Electric Drill and #2 Phillips Bit (if Preferred)

**WARNING**

Use tools with caution and follow all safety protocols.

**AVERTISSEMENT**

Utiliser des outils avec prudence et suivre tous les protocoles de sécurité.

# Introduction

This User Manual provides information about your Online UPS (A), one of the NEXSYS™ series power devices offered by Middle Atlantic®. You may have purchased additional items (some sold separately) as part of your NEXSYS UPS configuration.

For information about additional UPS products that are part of the NEXSYS series, such as expandable batteries and a RackLink™ network card, to name a few, refer to their respective documents available on the NEXSYS product page at [www.legrandav.com](http://www.legrandav.com) or contact support at [av.middleatlantic.techsupport@legrand.com](mailto:av.middleatlantic.techsupport@legrand.com) or (866) 977-3901.



**NOTE**

Images in this manual typically use a UPX-OL1000R-2 model UPS and a UPX-EXPANRUN-OL10 model expandable runtime battery to show the location of connections, buttons, and lights on the LED panel. Unless otherwise noted, the location of these items are similar on all models, and minor appearance variations do not affect the procedures explained.

## Some General Specifications

For more specification details, see [Specifications](#), on page **55**.

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
VA	1000VA@127V 1000VA@120V 1000VA@110V	1500VA@127V 1500VA@120V 1350VA@110V	2000VA@127V 2000VA@120V 1800VA@110V	3000VA@127V 3000VA@120V 2700VA@110V
Watts	1000W@127V 1000W @120V 1000W @110V	1450W@127V 1350W@120V 1200W@110V	1930W@127V 1800W@120V 1640W@110V	2900W@127V 2700W@120V 2500W@110V
Power Factor	1.0	0.9	0.9	0.9

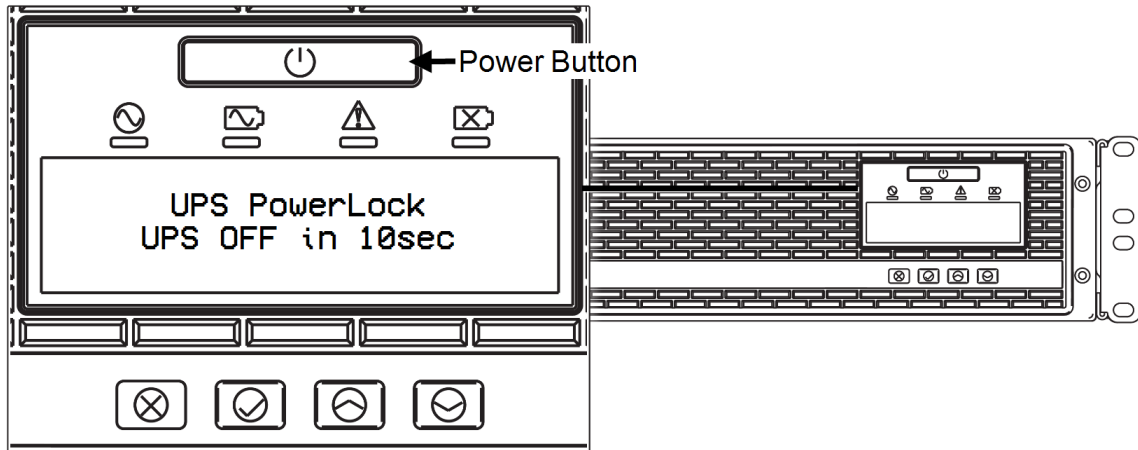
## Understanding the One-Time UPS Transport Mode



### NOTE

Your UPS comes from the factory with a one-time Transport Mode function enabled to minimize battery discharge.

If you press the power button while the UPS is in Transport Mode, the following message appears for 10 seconds on the LCD.



After 10 seconds, the LCD and UPS turn off.

The first time you plug the power cord of your UPS into an appropriately rated receptacle, the system turns off the one-time Transport Mode and the power button then functions normally. For more information, see [Understanding the UPS Power Button](#), on page [35](#)

## Charging Your UPS the First Time

You must first charge your UPS (A) for at least 8 hours before it can provide direct backup power to connected devices.

The auto charge feature charges the pre-installed battery whenever the UPS is plugged directly into an appropriately rated AC power receptacle using the supplied power cord (C) – whether the UPS is turned on or off.



### NOTE


First, use the power cord (C) and plug your UPS into AC power and allow it to charge for 8 hours before providing direct backup power to connected devices.

# Determining Your Equipment Power Requirements

Ensure that the equipment plugged into the UPS (A) does not exceed its rated capacity. If exceeded, an overload condition may occur and cause the UPS unit to shut down or the circuit breaker to trip.

Many factors affect the power requirements of your electronic equipment connected to your UPS. For optimal system performance always keep the overall load below 80% of the rated capacity.


## Understanding UPS Installation Requirements



**NOTE** Before installing your UPS (A), carefully review the following considerations to select a proper location. Most considerations apply to Expandable Battery options (not included) as well.

1. The UPS should be placed on a flat, clean surface. Place it in an area away from vibration, dust, humidity, high temperature, flammable liquids, gases, corrosive, and conductive contaminants. Install the UPS indoors in a clean environment, where it is away from windows and doors. Maintain a minimum clearance of 3.94" (100mm) on the bottom of the UPS to avoid dust and high temperatures.
2. Maintain an ambient temperature range of 32°F (0°C) to 104°F (40°C) for optimal UPS operation.
3. Maintain a maximum altitude of 1093.61yd. (1000m) to keep the UPS within normal operation at full load. If used in high altitudes, please reduce the connected load. Altitude derating power with connected loads for UPS normal operation is listed as follows:

Altitude (Feet and Meters)		Derating Factor
3280.84	1000	1.0
4921.26	1500	0.95
6561.68	2000	0.91
8202.1	2500	0.86
9842.52	3000	0.82



**NOTE** Derating factor values are based on density of dry air = 1.225 kg/m<sup>3</sup> at sea level, + 59°F (15°C).

4. Your UPS is equipped with a fan for thermal management. Place the UPS in a well-ventilated area and maintain a minimum clearance of 4" (100mm) in the front of the UPS, and 12"

(300mm) at the back and two sides of the UPS, for heat dissipation and maintenance access.

## Installing the UPS Inside of Your Enclosure



**WARNING** This procedure requires at least one additional person.

**AVERTISSEMENT** Cette procédure nécessite au moins une personne supplémentaire.



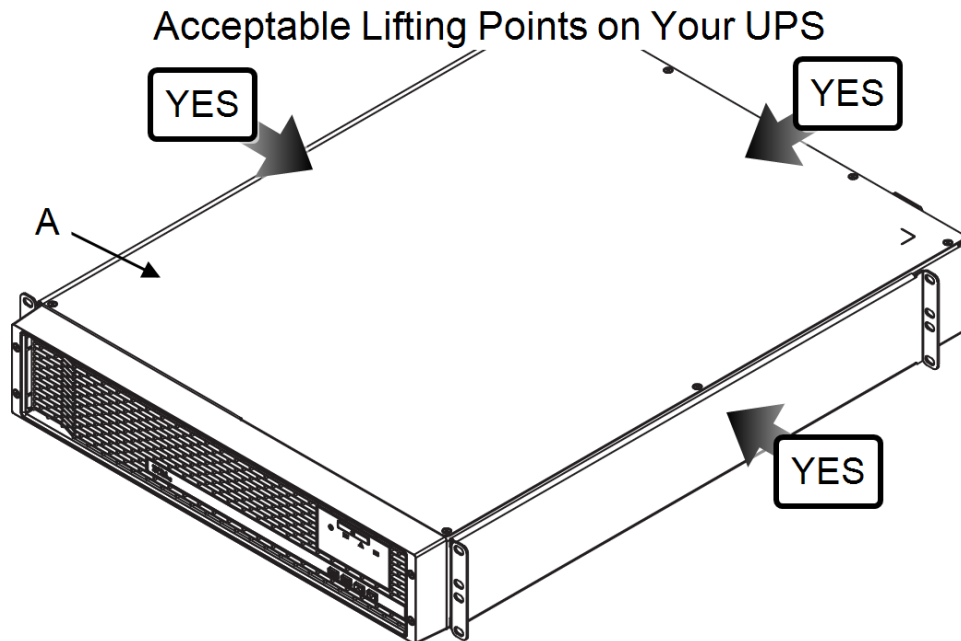
**NOTE** Images in this topic show a UPX-OL3000R-2 model UPS. Any minor appearance variations do not affect the procedure explained.

1. Carefully team lift your UPS (A), remove it from the packaging, and place it on an appropriate work surface.

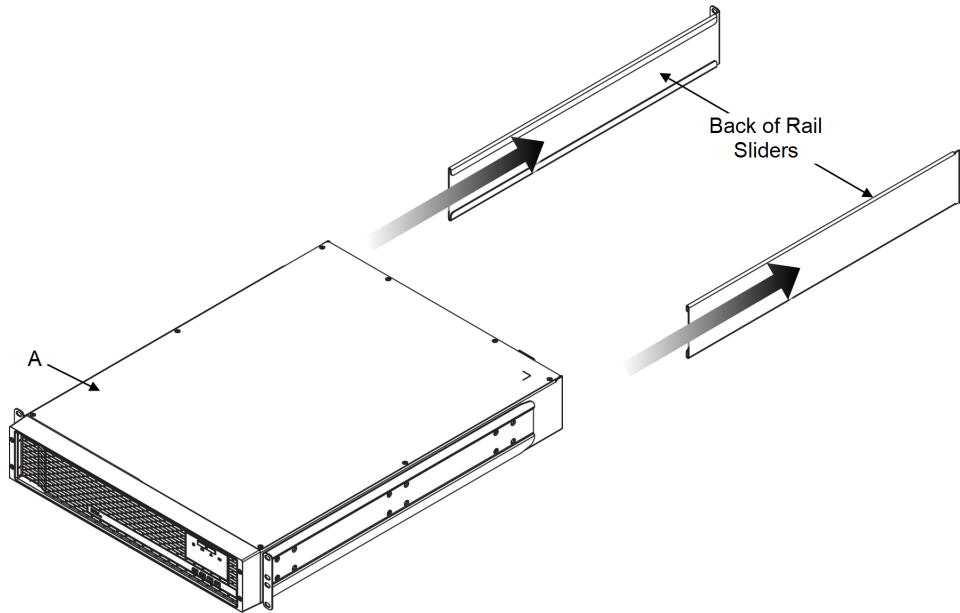


**CAUTION** Only lift from the sides and back of the unit and not by the front or rail sliders.

**ATTENTION** Soulevez uniquement par les côtés et l'arrière de l'unité et non par le avant ou les rails.



- Slide the back of each rail slider completely off the assembly.

**TIP**

Take a moment to consider where you plan to install your UPS inside your enclosure and the distance it will be from any corresponding expandable batteries. Installing the UPS above or below the expandable batteries (or close to it) simplifies connectivity and cable management.

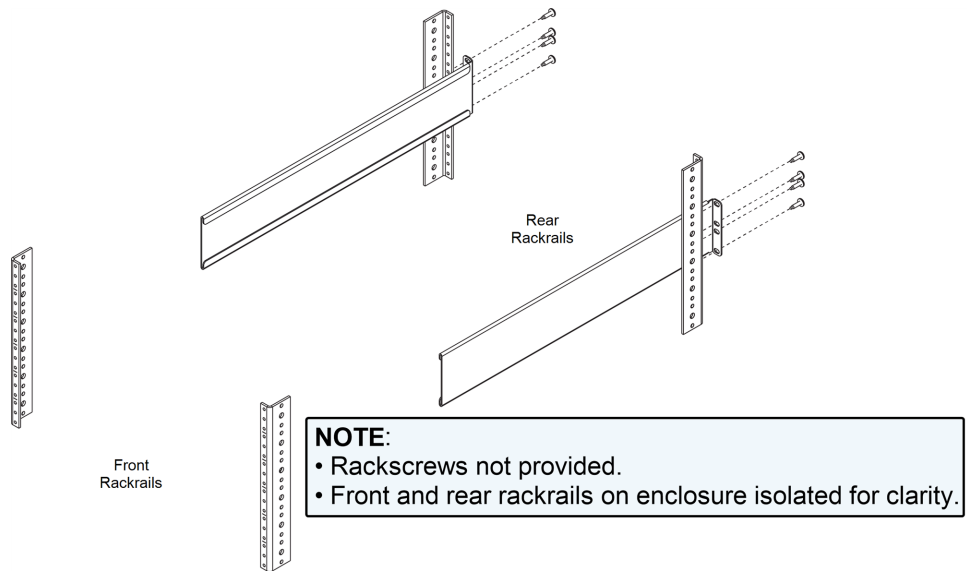
**NOTE**

If using electric drill, verify the torque is on the lightest setting and only increase as necessary.

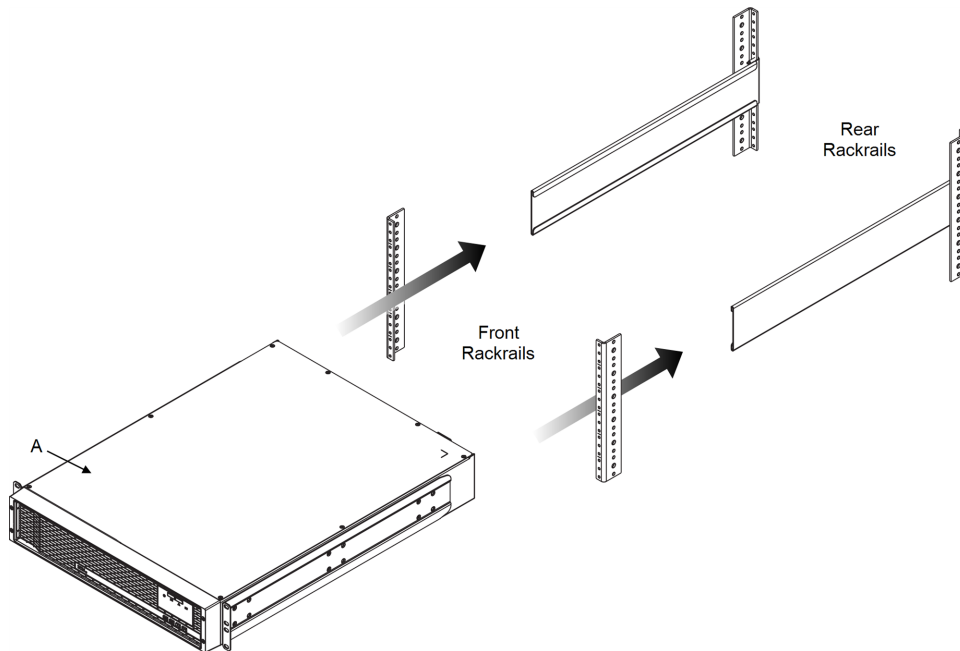
- Use electric drill, #2 Phillips bit, and (8x) rackscrews (not provided) to attach the ears on the back rail sliders to the rear rackrail at your desired height inside of your enclosure.

**WARNING** Every hole on the ear of each rail slider must be secured with a rackscrew (not provided).

**AVERTISSEMENT** Cette procédure nécessite au moins une personne supplémentaire.



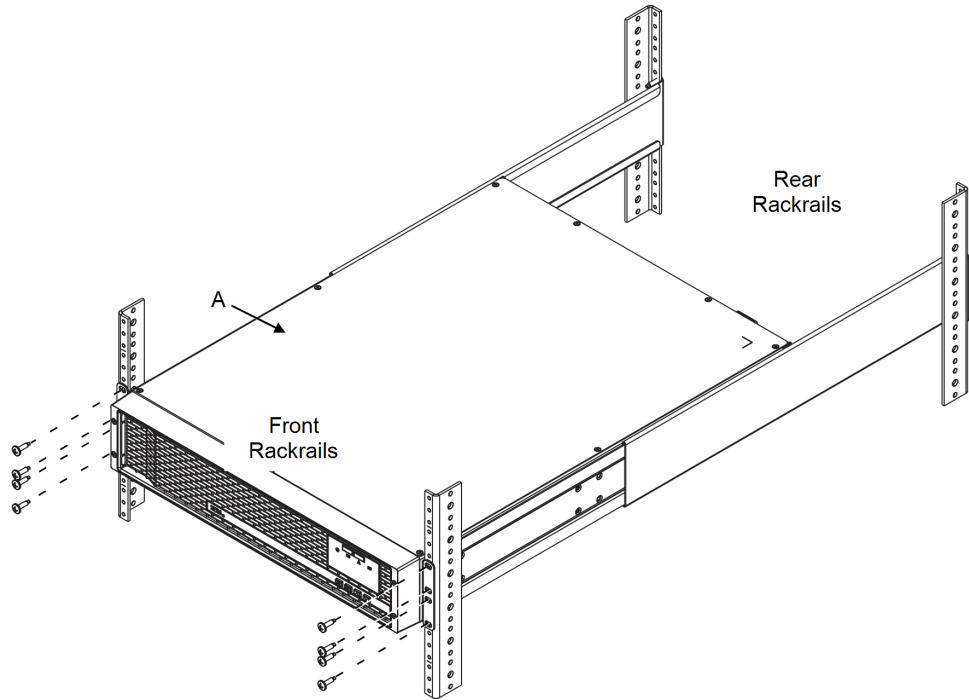
4. Team lift your UPS (A) and carefully slide the front of each rail slider over the back sliders until the ears on the front rail sliders are flush with the front rackrails on your enclosure.



5. Use electric drill and (8x) rackscrews (not provided) to attach the ears on the front rail sliders to the front rackrails on your enclosure.

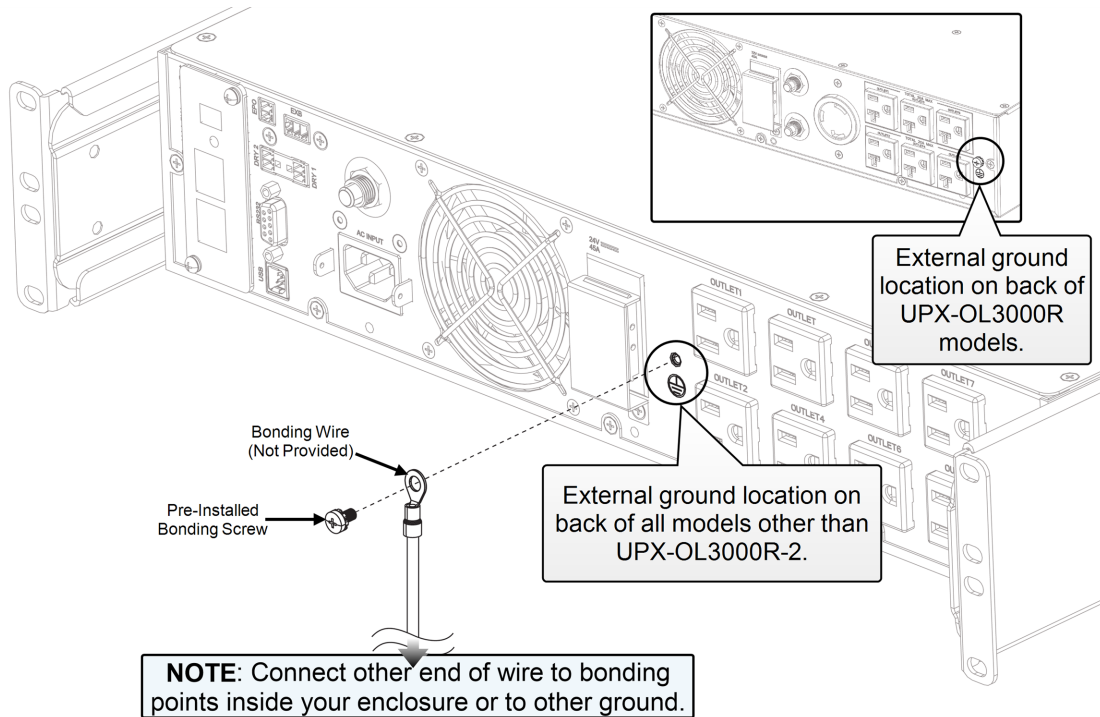
**WARNING** Every hole on the ear of each rail slider must be secured with a rackscrew (not provided).

**AVERTISSEMENT** Cette procédure nécessite au moins une personne supplémentaire.




- Please connect the permanent ground from the rear panel before installing the UPS. (External wiring: Please use Lead wire UL1015 #10 Green/Yellow.)

Before making cable connections, use a #2 Phillips screwdriver to remove the pre-installed screw in the external ground point on the rear panel of your UPS. Then, use the screw and a #10 UL1015 green/yellow bonding wire (not provided) and connect the UPS rear panel external ground to bonding points inside of your enclosure or other ground.

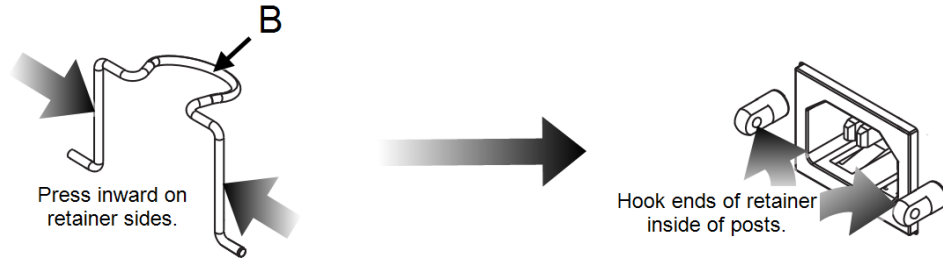


- Make cable connections as desired. For more information, see [Communicating with Your UPS](#), on page [23](#) and [Understanding Rear Panel Connections](#), on page [30](#).







**NOTE** The power demands of devices such as laser printers, paper shredders, copiers, space heaters, vacuum cleaners, sump pumps, or other large electrical equipment are typically too high for connecting to battery and surge-protected outlets. Doing so will overload and possibly damage your UPS.

8. If your system includes any expandable runtime battery option(s), proceed to [Communicating with Your UPS](#), on page **23**, [Disabling and Enabling the UPS Emergency Power Off \(EPO\) Function](#), on page **24**, and [Connecting the Expandable Runtime Battery Option](#), on page **25**. Otherwise, continue with the remaining steps in this topic.
9. If applicable, install the power cord retainer (B) by pressing inward on its sides and hooking the ends into the posts on the back of your UPS as shown.

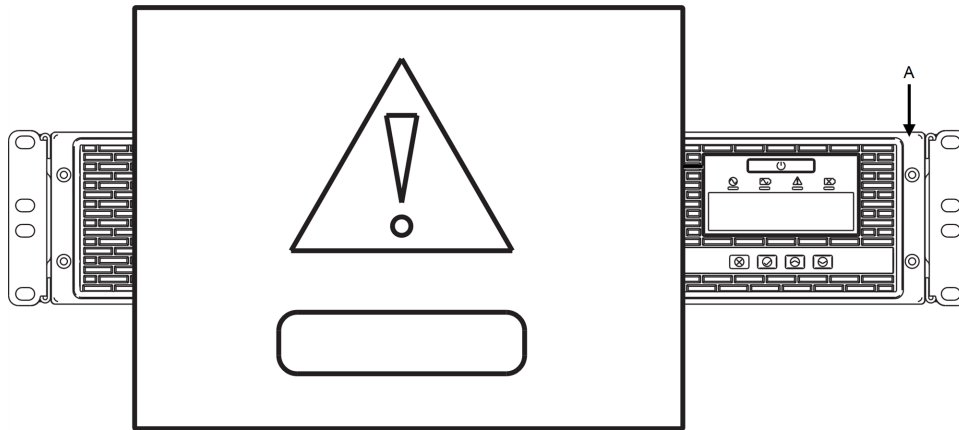


10. Use the power cord (C) to connect your UPS from the AC input into an outlet on an appropriately rated receptacle.

	<p><b>WARNING</b> Plug the UPS power cord into a two-pole, three-wire, grounded receptacle only. Avoid using extension cords.</p>
	<p><b>AVERTISSEMENT</b> Branchez l'onduleur dans une prise bipolaire, trois fils et mise à la terre uniquement. Évitez d'utiliser des rallonges.</p>

	<p><b>WARNING</b> The receptacle should be protected by a fuse or circuit breaker. The circuit should not be servicing other equipment with large electrical demands.</p>
	<p><b>AVERTISSEMENT</b> La prise doit être protégée par un fusible ou un disjoncteur. Le circuit ne doit pas entretenir d'autres équipements avec de grandes exigences électriques.</p>

- 11. Check the LCD front panel on your UPS (A) to confirm that the site wiring fault indicator light is not lit. The fault indicator light turns on when your UPS is plugged into an improperly wired receptacle.

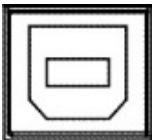


## Communicating with Your UPS

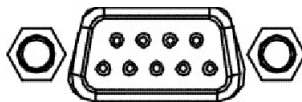
Communication ports are available on the back of your UPS (A) which allow you to monitor and/or control your device from a desktop or laptop computer.

This may be done by direct connection using the USB-B to USB-A Cable (D), the DB9 RS-232 cable (E), or an Ethernet connection via the network card slot if you purchased a RackLink™ Network Card option. The network card option also may be used to communicate with your UPS remotely over the Internet.

### Serial Connections



USB Type B



RS-232

### Network Connection



Ethernet

For more information about communicating with your UPS over the USB-B port, refer to the [UPS Manager Software User Manual \(100-00077\)](#).

For more information about communicating with your UPS using a wired Ethernet connection or via wireless connection over the internet using the RackLink™ Network Card option, refer to the [RackLink Network Card User Manual \(100-00074\)](#).

# Disabling and Enabling the UPS Emergency Power Off (EPO) Function

Your UPS (A) is equipped with an EPO (emergency power off) function.

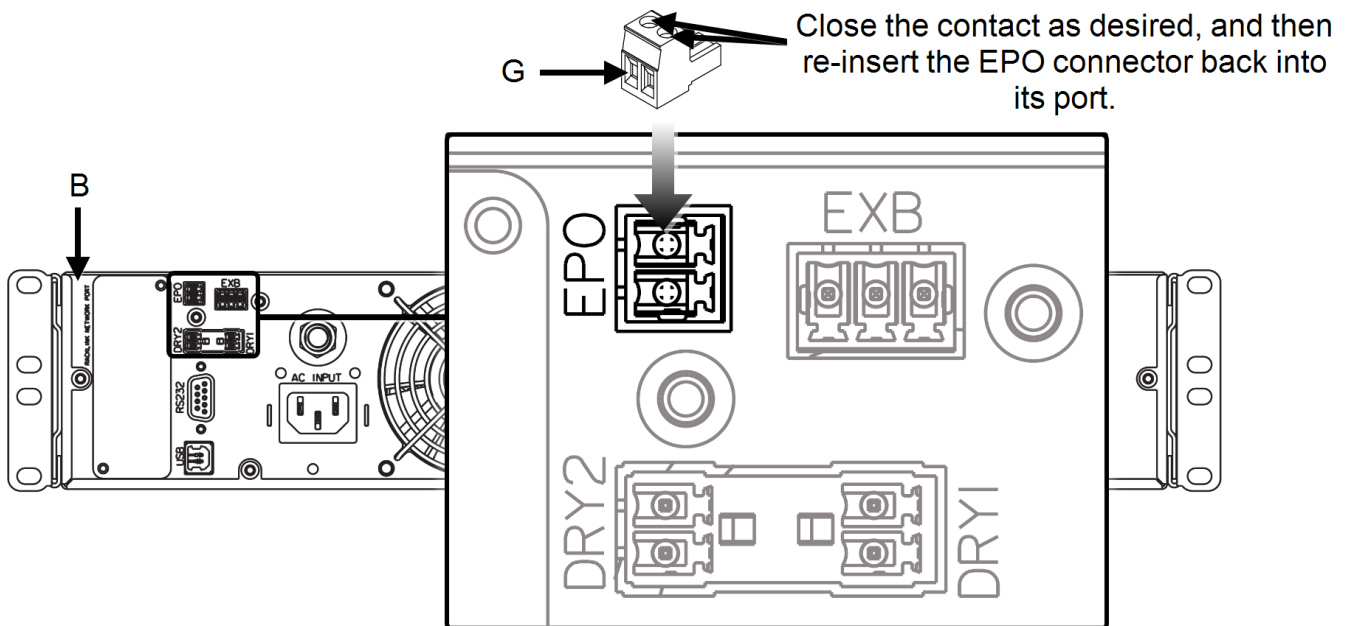
Use a terminal block plug (F) to enable the EPO function by CLOSING the contact. The UPS comes from the factory with the contact OPEN and EPO function disabled.



**NOTE**

- Images in this manual typically use a UPX-OL1000R-2 model UPS and a UPX-EXPANRUN-OL10 model expandable runtime battery to show the location of connections, buttons, and lights on the LED panel. Unless otherwise noted, the location of these items are similar on all models, and minor appearance variations do not affect the procedures explained.
- The EPO connector and socket are shown in black for clarity.

For more information, see [Understanding Rear Panel Connections](#), on page **30**.



# Connecting the Expandable Runtime Battery Option

An expandable runtime battery option is available for your UPS. If you purchased an expandable battery for your configuration, the following topic shows you how to add it to your system properly.



## NOTE

- Up to 4 expandable batteries may be added to your UPS system.
- Images in this topic use a UPX-OL1000R-2 model UPS and a UPX-EXPANRUN-OL10 model expandable runtime battery to show the location of connections, buttons, and lights on the LED panel. Unless otherwise noted, the location of these items are similar on all models, and minor appearance variations do not affect the procedures explained.

For information about battery replacement, see [Replacing the Battery](#), on page [47](#) or refer to the [Online UPS Expandable Runtime Battery User Manual \(100-00095\)](#).

1. Use a #2 Phillips screwdriver to remove the screw and plate covering the expandable runtime battery main connector ports on the back of both your UPS (A) and expandable runtime battery option.


Carefully set aside the screws and plates for future use.



## NOTE

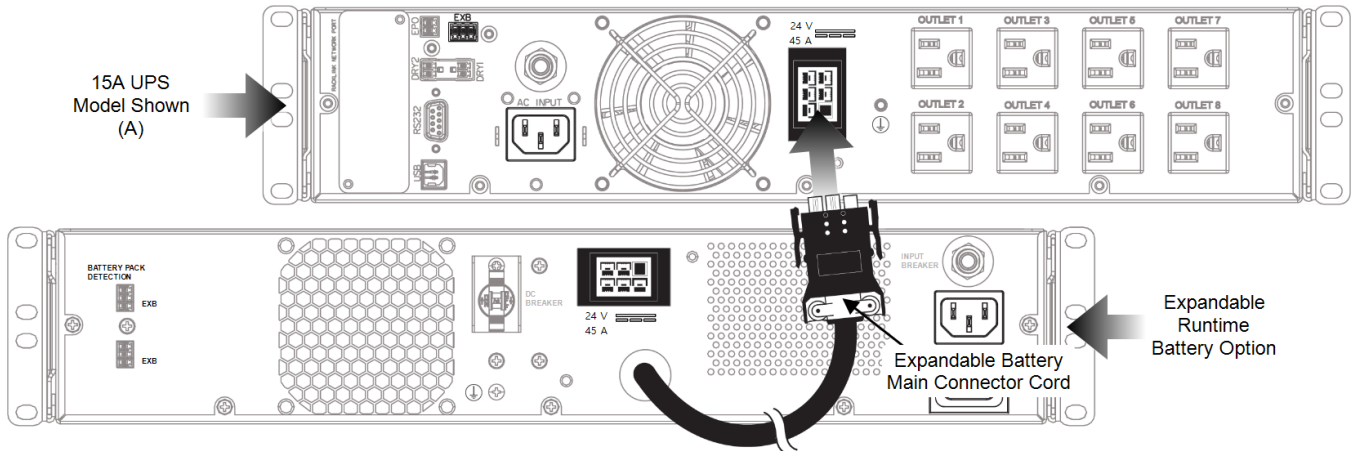
If you are adding exactly one expandable runtime battery to your UPS system, you may decide to leave the main connector port screw and plate intact on your expandable runtime battery, if desired.

2. Connect the end of the expandable runtime battery main connector cord into the corresponding port on the back of your UPS as shown.

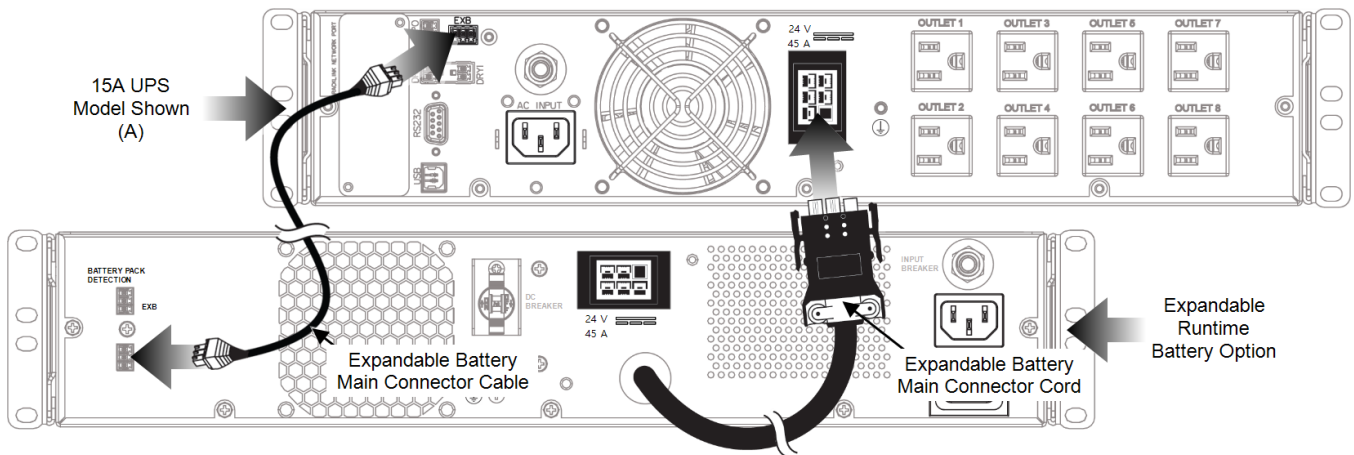


**NOTE**

- Applicable cords, cables, and ports shown in black for clarity.
- After connecting the battery or batteries, the entire system must be charged for 8 hours before providing direct backup power to connected devices. For more information, see [Charging Your UPS the First Time](#), on page **15**.

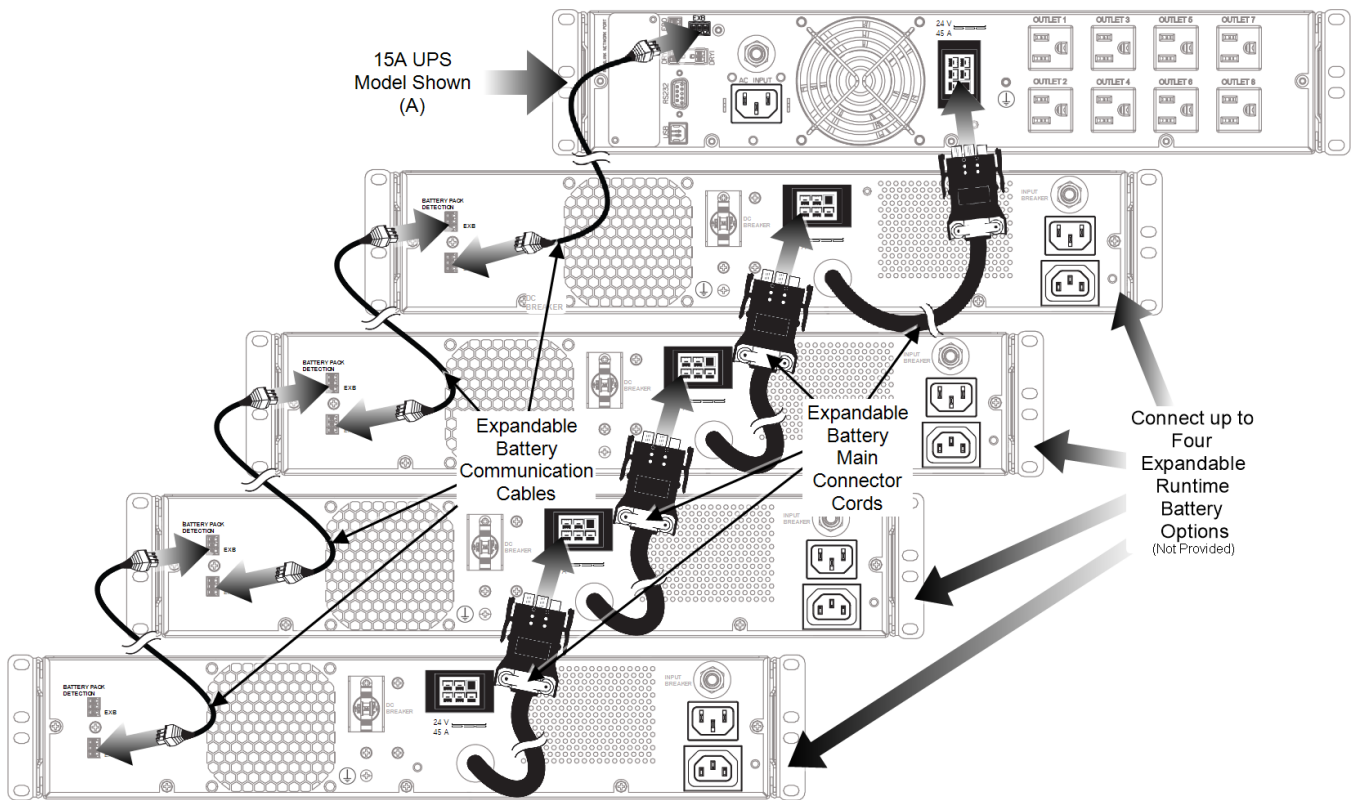


3. Connect one side of the expandable battery communication cable into the lower left port labeled EXB on the back of your expandable battery as shown.

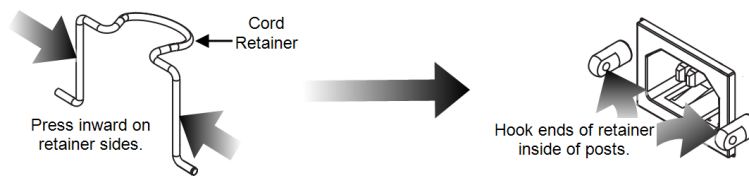


4. Connect the other side of the expandable battery communication cable into the port labeled EXB on the back of your UPS.

**NOTE** Up to 4 expandable runtime battery options may be added to your UPS system and should only be connected as shown.



5. Install the power cord retainer (B) by pressing inward on its sides and hooking the ends through the input post holes on the back of your UPS as shown.



6. Only use the power cord (C) provided with your UPS unit and the expandable runtime battery or batteries, and either directly connect them to appropriately rated receptacles, or daisy-chain the power to multiple batteries (where applicable) using IEC-to-IEC short cord(s) as shown.

**WARNING** Plug the UPS power cord into a two-pole, three-wire, grounded receptacle only. Avoid using extension cords.

**AVERTISSEMENT** Branchez l'onduleur dans une prise bipolaire, trois fils et mise à la terre uniquement. Évitez d'utiliser des rallonges.

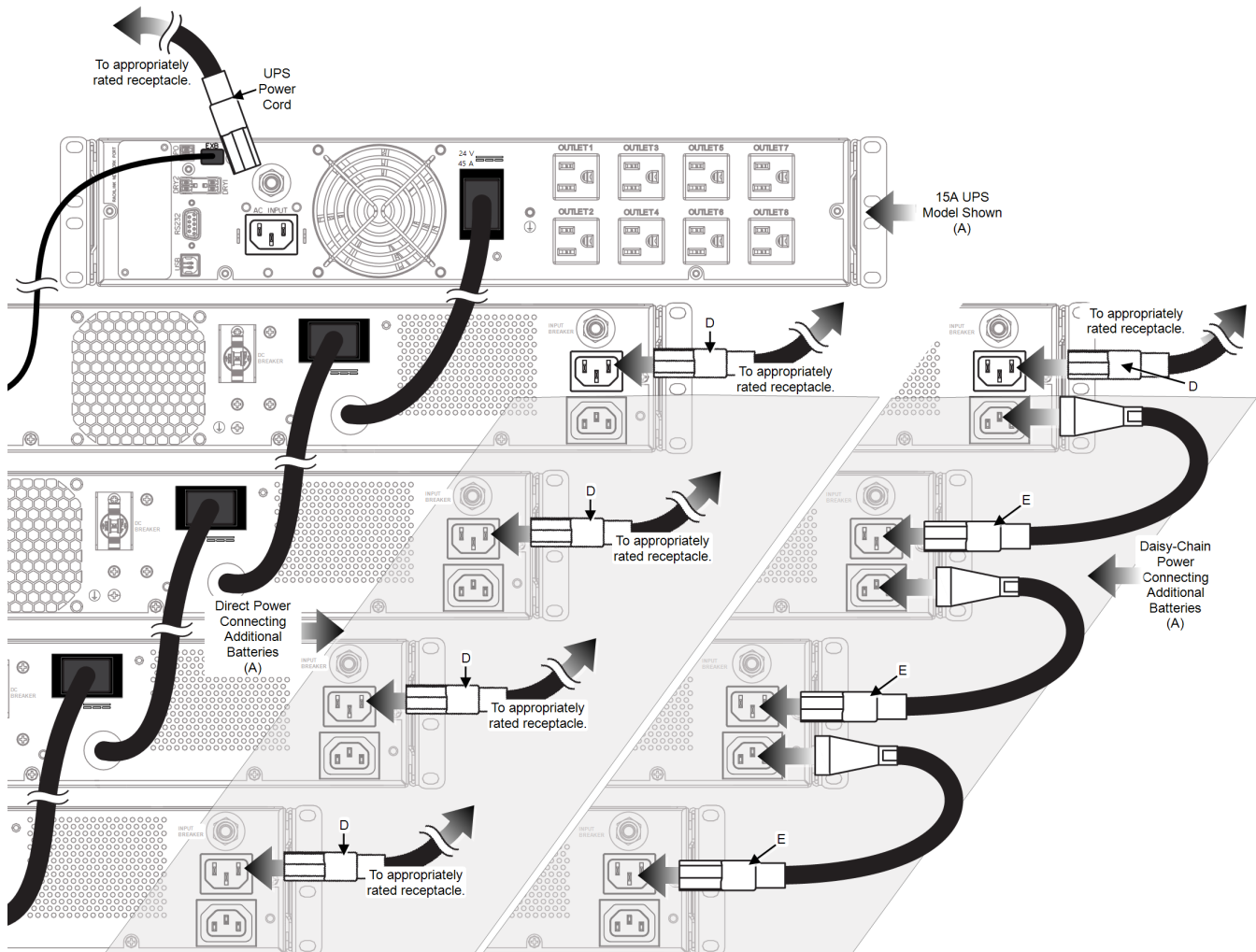
**WARNING**



The receptacle should be protected by a fuse or circuit breaker. The circuit should not be servicing other equipment with large electrical demands.

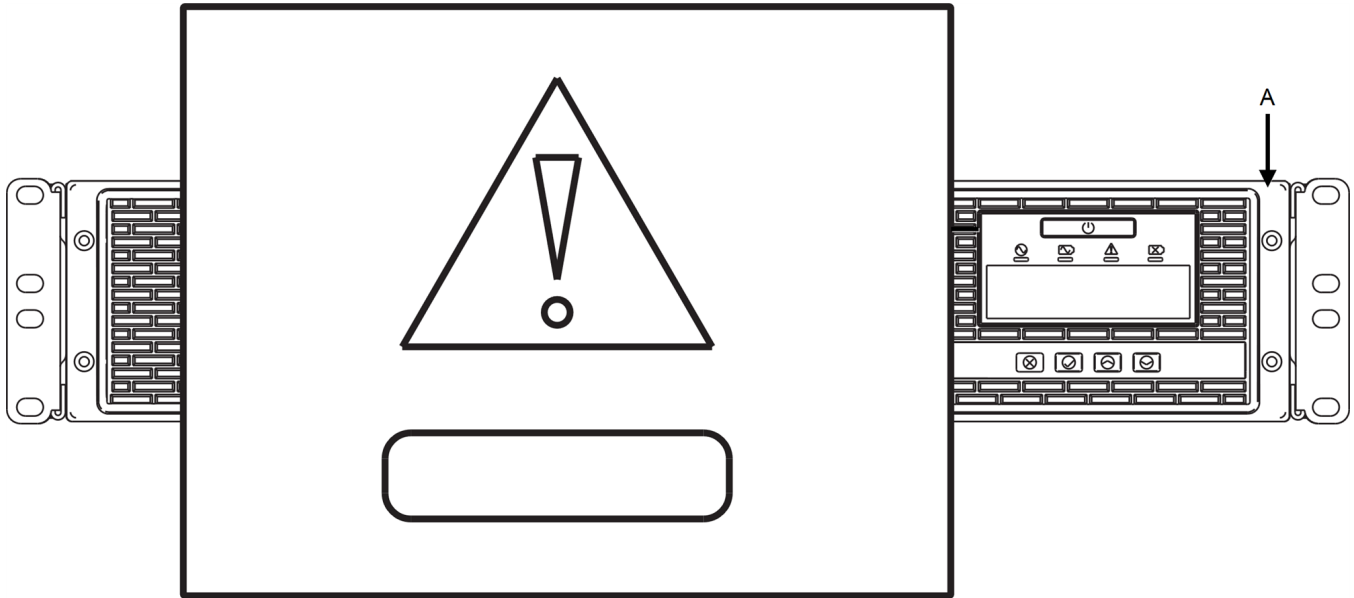
**AVERTISSEMENT**

La prise doit être protégée par un fusible ou un disjoncteur. Le circuit ne doit pas entretenir d'autres équipements avec de grandes exigences électriques.



7. After making all expandable runtime battery connections to your UPS, the whole system must first be charged for at least 8 hours before it can provide direct backup power to connected devices. For more information, see [Charging Your UPS the First Time](#), on page **15**.
8. Press the power button on the UPS to turn on the system. For more information, see [Understanding the UPS Power Button](#), on page **35**.

- Check the LCD panel on your UPS to confirm that the site wiring fault indicator light is not lit. This light turns on when your UPS is plugged into an improperly wired receptacle.



- Navigate to **Main Menu, Configuration Functions, External Battery** on the LCD front panel of your UPS and verify the system is detecting connections in the manner you prefer. The default setting is Auto, but you might prefer manually entering the number of external runtime batteries on your system instead.

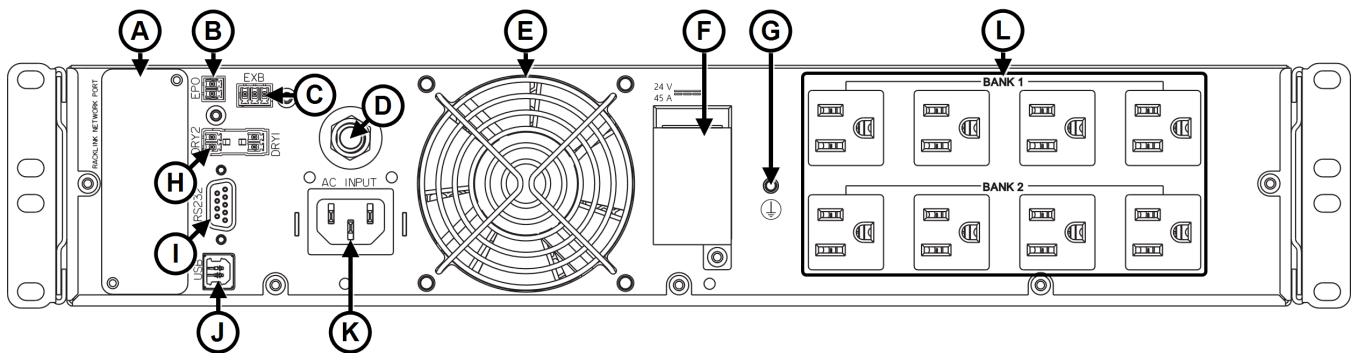
Option	Description
<b>External Battery 0 – 4</b>	Set the number of external battery pack(s) attached to your UPS.
<b>Auto</b>	Automatically detect the number of external battery pack(s) attached to your UPS.

# Basic Operation and Feature Set

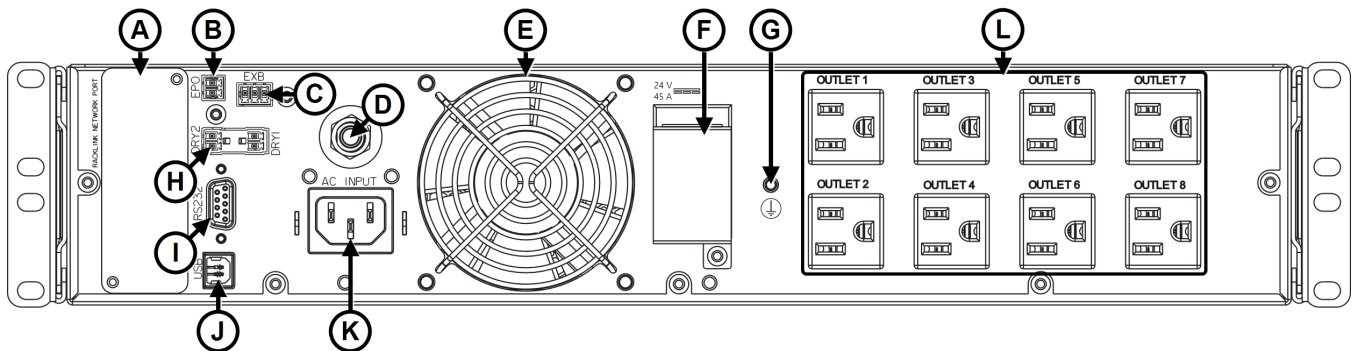
## Understanding Rear Panel Connections

Labels on the rear panels of the following UPS models correspond with explanations further below.

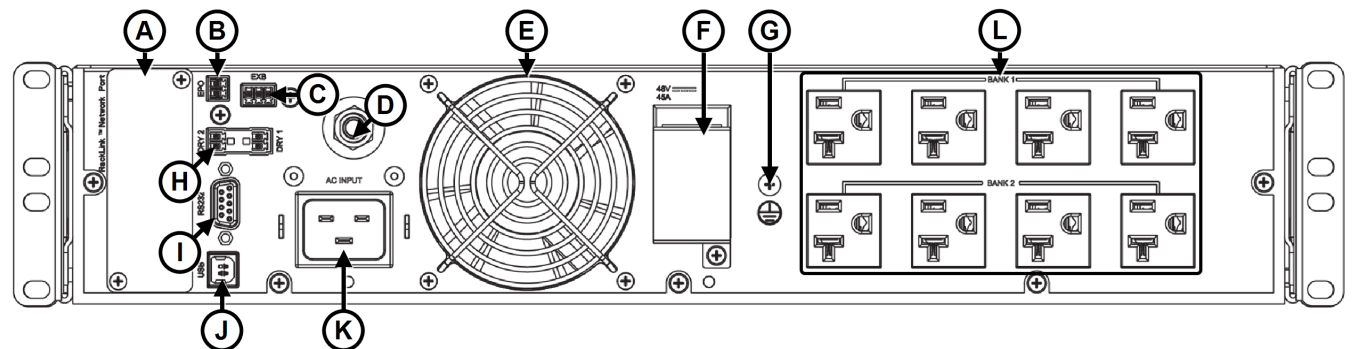
### 1K and 1.5K Bank Models



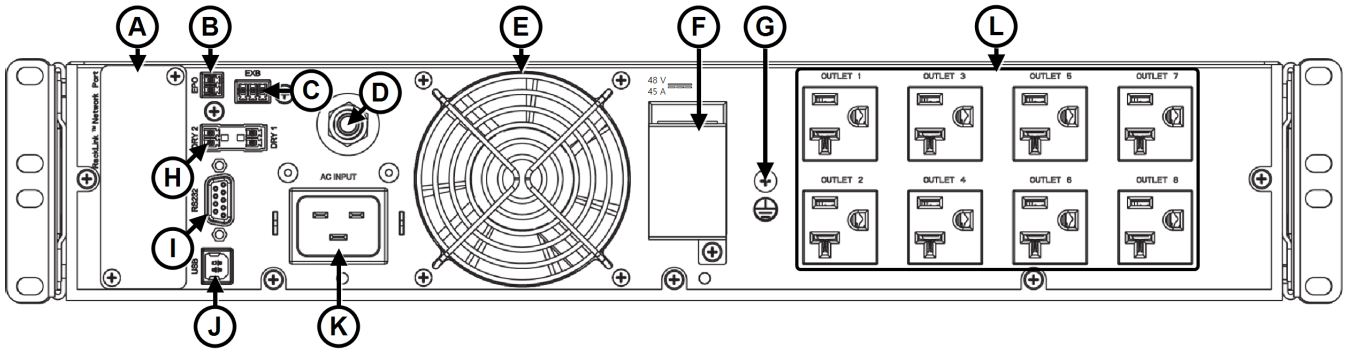
### 1K and 1.5K Outlet Models



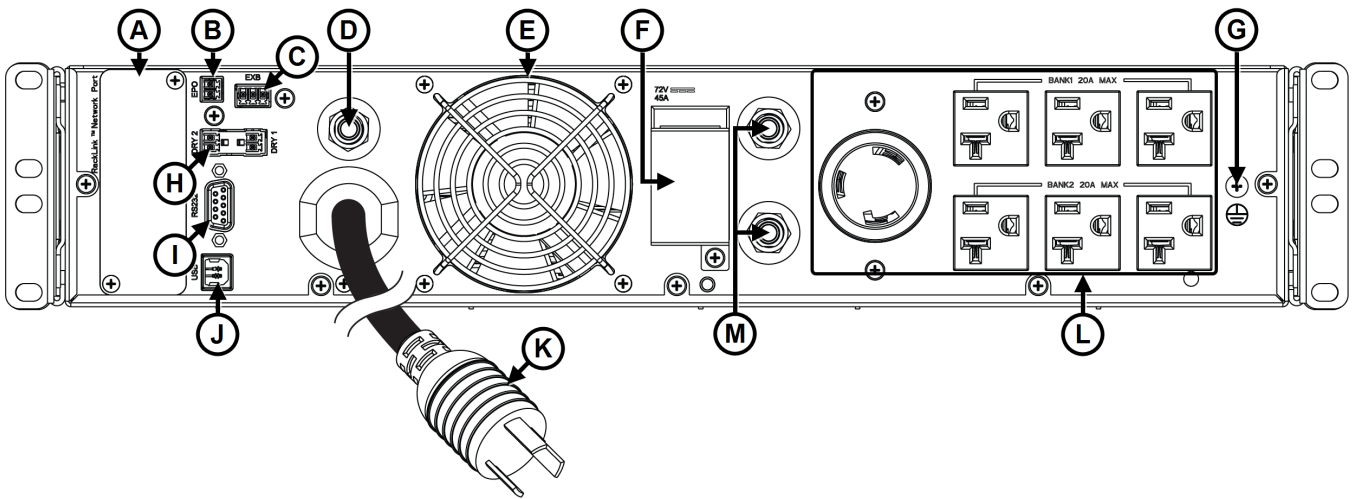
### 2K Bank Model



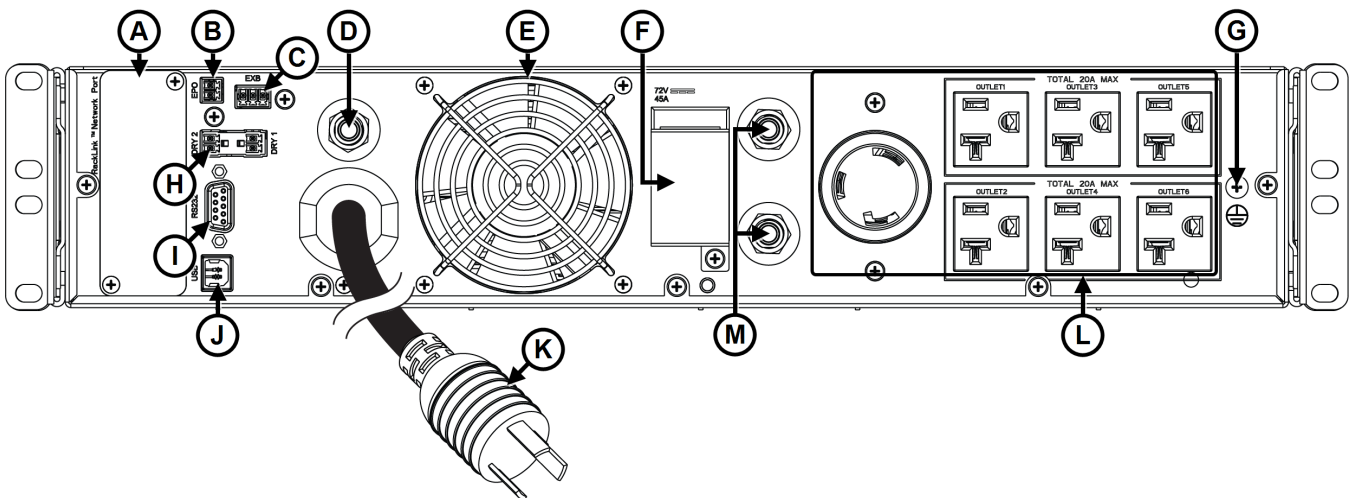
### 2K Outlet Model



### 3K Bank Model



### 3K Outlet Model



- A. **RackLink™ Network Card Port**
- B. **The Emergency Power Off (EPO) Port:** Used for UPS remote shut down control (not for telecommunication use).
- C. **The External Battery Unit Detection Port (EXB):** If external battery packs are purchased and properly connected, this port detects the number of pack(s) for estimated runtime calculations on your UPS.
- D. **Input Circuit Breaker:** Located next to the AC input, the input circuit breaker trips when the load exceeds the UPS power rating.
- E. **Fan**
- F. **External Battery Port:** Port where the expandable battery main connector is inserted.
- G. **External Grounding and Bonding Point:** Used for connecting an external ground wire (not provided) to bond the chassis.

For more information, see [Installing the UPS Inside of Your Enclosure](#), on page [17](#).

- H. **Dry Contact Communication Port:** These two ports are normally OPEN. Dry 1 will close when input power is lost. Dry 2 closes when battery power is low.
- I. **RS-232 Communication Port:** Used for direct UPS monitoring and control.
- J. **USB Communication Port:** Used for direct UPS monitoring and control.
- K. **AC Input (Models Other Than 3K):** The inlet is IEC14 (for 15A) or IEC20 (for 20A) power cord based on the model you purchased.

For more information see, [Supplied Components and Hardware](#), on page [xii](#) and [Replacing the Power Cord \(if Necessary\)](#), on page [51](#).

**Fixed AC Power Cable (3K Models Only):** Fixed L5-30P 10' (3.05M) cable.

For more information, see [Supplied Components and Hardware](#), on page [xii](#).

- L. **Outlets (Models Other Than 3K):** Depending on your model, the output receptacles are equipped with load shedding functionality and configured into 2 bank-controlled sets of 4 outlets, or 8 individually controlled outlets.

**Outlets (3K Models Only):** Depending on your model, the output receptacles are equipped with load shedding functionality and configured into 2 bank-controlled sets of 3 outlets with one uncontrolled twist-to-lock outlet, or 6 individually controlled outlets with one uncontrolled twist-to-lock outlet.

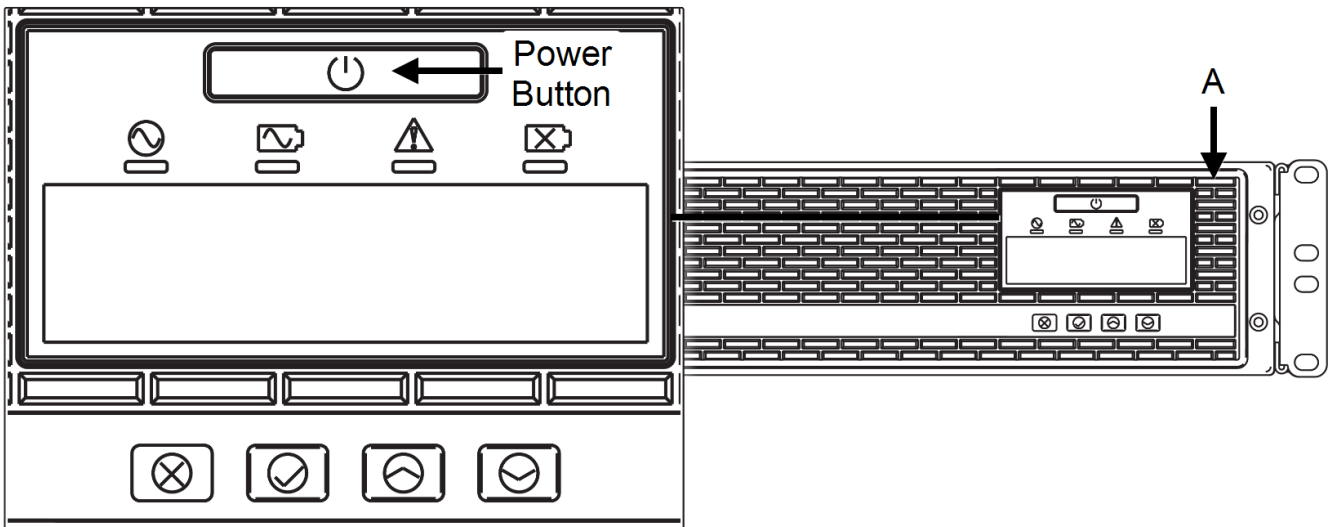
- M. **Output Circuit Breakers (3K Models Only):** Two outlet-protective circuit breakers.

## Using Front Panel Buttons and the LED Indicators




1. If you haven't done so already, your UPS (A) must first be charged for at least 8 hours before it can provide direct backup power to connected devices. For more information, see [Charging Your UPS the First Time](#), on page [15](#).
2. Press the power button on the front panel and hold it until you hear a single beep, then release, to turn on your UPS.

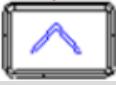

For more information, see [Understanding the UPS Power Button](#), on page [35](#).

The rest of this topic to explains how use the front panel buttons and interpret the LED indicators.







### Front Panel Buttons

Front Panel Button	Operation
 <b>Power</b>	Press for approximately 1 second to turn UPS on or off. Press for approximately 4 seconds to start a manual test.
 <b>Cancel, Back</b>	Press to cancel or return to a previous LCD menu item.
 <b>Select</b>	Press to select LCD menu options.

Front Panel Button	Operation
 Up Arrow	Press to scroll up the LCD menu.
 Down Arrow	Press to scroll down the LCD menu.

### LED Indicators

LED Icon	LED Icon Color or Status	Operation
	White	Your UPS is in Normal Mode.
	Flashing	Your UPS is in Bypass Mode.
	Orange	Your UPS is in Battery Mode.
	Red	Your UPS has an internal fault. For more information, see <a href="#">Understanding Fault Log Messages</a> , on page 44.
	Red	Your UPS detects a weak, bad, or disconnected battery.

### Understanding Your UPS Status Modes

- Standby Mode:** In this mode, the UPS is Off, the LCD is functioning, the unit is plugged in, and your batteries are still being charged; however, no banks or outlets have power. You can only access the service mode and reset to default functions when your UPS is in standby mode.
- Bypass Mode:** When your UPS is In this mode the critical loads are directly supplied by utility power and the batteries are charged.
- Normal Online Mode:** In this mode connected loads are supplied by the inverter, which derives its power from utility AC power, the UPS charges the batteries, and provides power protection to connected loads.

- **Battery Mode:** When your UPS is operational during a power outage, the batteries provide DC power to maintain inverter operation and support connected critical loads.
- **ECO Mode:** When your UPS is in this mode and the utility input voltage and frequency are within the rating voltage  $\pm 10\%$  and rating frequency  $\pm 5\text{Hz}$  range, the connected loads are supplied by utility power; if they are out of range, connected loads are supplied by the inverter.
- **Frequency Converter Mode:** When your UPS is in this mode the output frequency can be set as 50Hz or 60Hz. After setting up the output frequency, the system automatically disables the bypass function.
- **Smart Mode:** When your UPS is in this auto On-Off mode, the unit automatically switches from bypass mode to online mode based on the output load percentage.

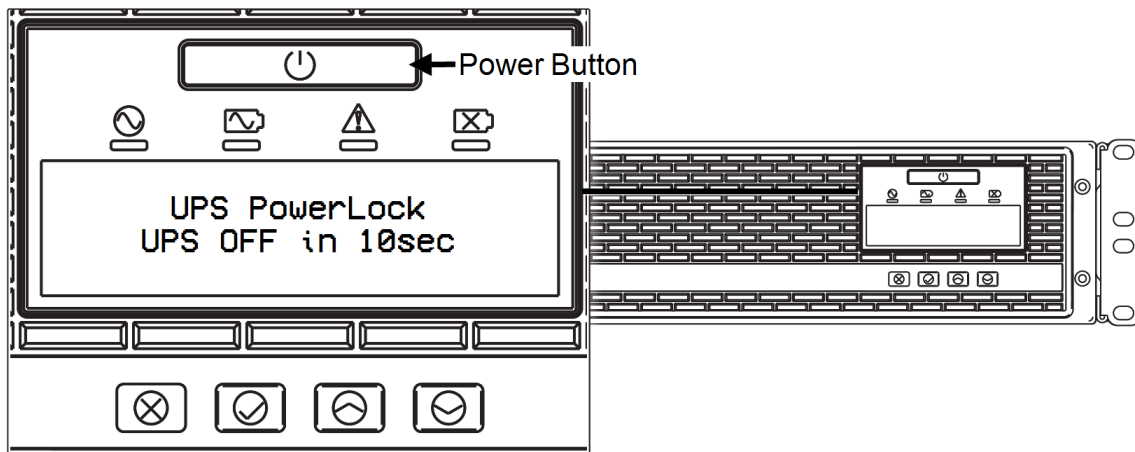
## Understanding the UPS Power Button



### NOTE

Your UPS comes from the factory with a one-time Transport Mode function enabled to minimize battery discharge.

If you press the power button while the UPS is in Transport Mode, the following message appears for 10 seconds on the LCD.



After 10 seconds, the LCD and UPS turn off.

The first time you plug the power cord of your UPS into an appropriately rated receptacle, the system turns off the one-time Transport Mode and the power button then functions as follows:

- Press and hold the power button until the display shows “Release Button Turn On UPS.” The unit then powers On – whether it’s in Line Mode (plugged in) or Battery Mode.

- Press and hold the power button until the display shows “Release Button Shutdown UPS.” The unit then powers Off.
- When the UPS is On, in Line Mode, and you press and hold the Power button until you hear exactly 4 beeps, and then immediately release the button, the unit perform a manual battery self-test.

## Viewing Status Information on the LCD Panel

Use Up and Down buttons to scroll the status information on your UPS. Use the Cancel button to go back or clear any possible fault or warning notifications.

For more information, see [Using Front Panel Buttons and the LED Indicators](#), on page [33](#).



**NOTE**

The status page list and corresponding sub-pages differ based on Bank or Outlet models.

### *Understanding Status Information on Bank UPS Models*

Page	Information Shown
General Page	Displays the UPS output voltage and battery state values.
Operating Mode	Displays the UPS operation Mode (Normal or Battery Mode).
Load Total	Displays the UPS total output load.
Battery State	Displays battery capacity and voltage.
Input Status	Displays the UPS input voltage and frequency.
Output Status	Displays the UPS output voltage and frequency.
Last UPS Test	Displays the UPS last battery test result.
Load Bank State	Displays the UPS output relay state as On or Off.
Est Runtime	Displays the UPS estimated runtime.


### *Understanding Status Information on Outlet UPS Models*

Page	Information Shown
General Page	Displays the UPS output voltage and battery general state.
Operating Mode	Displays the UPS operation Mode (Normal or Battery Mode).

Page	Information Shown
Load Total	Displays the UPS total output load.
Battery State	Displays battery capacity and voltage.
Input Status	Displays the UPS input voltage and frequency.
Output Status	Displays the UPS output voltage and frequency.
Last UPS Test	Displays the UPS last battery test result.
Outlet Status (Screen 1)	Displays the status of the UPS outlet numbers 1, 2, 3, or 4 as either O (On) or X (Off).
Outlet Status (Screen 2)	Displays the status of the UPS outlet numbers 5, 6, 7, or 8 as either O (On) or X (Off).
Est Runtime	Displays the UPS estimated runtime.

## Operating the LCD Main Menu

Press the Select button to enter the main menu.



**NOTE** Depending on the UPS status you are in when pressing the Select button, you may have to press it again for the main menu to appear.

Use Up and Down buttons to scroll and the Cancel button to go back or clear any possible fault or warning notifications.

For more information, see [Using Front Panel Buttons and the LED Indicators](#), on page **33**.

Menu Item	Information Shown
Configuration	Displays UPS settings that can be configured by the user.
Event Log	Displays the 3 most recent Fault and Warning event messages.
Information	Displays the UPS model and serial number, replacement battery part number, battery installation date, and the UPS firmware version. If you have a RackLink network card option installed and configured, the screen also shows the UPS name (if configured in the manager software), MAC address, IP address, and serial number.

## Using Main Menu, Configuration Functions

Press the Select button to enter the configuration menu.

Use Up and Down buttons to scroll and the Select button to choose a configuration function.

For more information, see [Using Front Panel Buttons and the LED Indicators](#), on page **33**.

<b>Configuration Function</b>	<b>Available Settings and Descriptions</b>
Audible Alarm	Setup the audible alarm on your UPS as On, Off, or Mute.
Bank/Outlet	Turn banks or outlets on your UPS On or Off.
External Battery	Setup UPS external battery packs.
Reset to Default	Resets the UPS to its factory default settings.
Reset Bat aging coefficient	Resets the Battery aging coefficient settings. Set the coefficient to Yes whenever you perform a battery replacement to optimize your battery runtime calculation.
Service Mode	Setup UPS functions such as password, activating load shedding, changing the voltage output and sensitivity, and other items.
Bypass H Range	Setup bypass voltage upper limit range 5%, 10%, 15%.
Bypass L Range	Setup bypass voltage lower limit range 5%, 10%, 15%.
ECO H Range	Setup ECO voltage upper limit range 5%, 10%, 15%.
ECO L Range	Setup ECO voltage lower limit range 5%, 10%, 15%.
Off mode setting	Setup the off mode on your UPS Standby or Bypass.
Smart Mode Load Setting	Setup smart mode load on your UPS 20%~80%.

## ***Using Main Menu, Configuration Functions, Audible Alarm***

Press the Select button to enter the audible alarm menu.

Use Up and Down buttons to scroll and the Select button to choose from the following audible alarm options.

<b>Alarm Option</b>	<b>Description</b>
Enable	Turns On alarms as described in <a href="#">Understanding Enabled or Muted Alarms</a> , on page <b>39</b> .

Alarm Option	Description
Mute	Silences alarms only for the current event. After the event, alarms will sound again. For more information, see <a href="#">Understanding Enabled or Muted Alarms</a> , on page <a href="#">39</a> .
Disable	Alarms are permanently silenced until set back to either Enable or Mute.

## Understanding Enabled or Muted Alarms

System events trigger the following sounds when your audible alarm set to either Enabled or Mute options.

Event	Description
When the UPS is OFF and BYPASS OUTPUT is enabled	Emitting 1 beep every 2 minutes.
Battery Mode	Emitting 1 beep every 4 seconds.
Low Battery	Emitting 1 beep every 0.5 seconds.
Overload Warning	Emitting 1 beep every 0.5 seconds.
Alarm Warning	Emitting 1 beep every second.
Fault	Continuous beeping.

## ***Using Main Menu, Configuration Functions, Bank/Outlet***

Press the Select button to enter the bank or outlet menu.

### **Bank Models**

Use Up and Down buttons to scroll and the Select button to choose from the following options.

<b>Option</b>	<b>Description</b>
Load Bank 1	Turn Load Bank 1 On or Off.
Load Bank 2	Turn Load Bank 2 On or Off.

### **Outlet Models**

Use Up and Down buttons to scroll and the Select button to choose from the following options.

<b>Option</b>	<b>Description</b>
Outlet Numbers 1 – 8	Turn Outlet Numbers 1 – 8 On or Off.

## ***Using Main Menu, Configuration Functions, External Battery***

Press the Select button to enter the external battery menu.

Use Up and Down buttons to scroll and the Select button to choose from the following options.

<b>Option</b>	<b>Description</b>
External Battery 0 – 4	Set the number of external battery pack(s) attached to your UPS.
Auto	Automatically detect the number of external battery pack(s) attached to your UPS.

## ***Using Main Menu, Configuration Functions, Reset to Default***

Press the Select button to reset the UPS configuration functions to the following default parameters.

<b>Function</b>	<b>Default Parameter</b>
Audible Alarm	Set to On.
Bank/Outlet	All banks and outlets turned On.
External Battery Pack	Set to Auto detect.

Function	Default Parameter
Battery Replace Date	Set to 1/1/2022.
Output Voltage	Set to 120V.
Load Shedding	Set to Enabled.
Service Mode Password	Set to 0000.
Battery Aging Coefficient	Set to 100.
Bypass H Range	Set to 10%.
Bypass L Range	Set to 15%.
ECO H Range	Set to 10%.
ECO L Range	Set to 10%.
Off mode setting	Set to Bypass.
Autonomy time setting	Set to 0, meaning disabled.
Smart Mode Load setting	Set to 20%.
Fault and Warning Log	Set to clear notifications for either event.

## Using Main Menu, Configuration Functions, Service Mode



**NOTE**

- Service mode functions are password protected and only available when your UPS is in Standby Mode.
- The default password for access is 0000 as mentioned in the previous topic.
- The 0000 password is entered by default, and you must press the select button to verify each password character.

For more information about status modes, see [Understanding Your UPS Status Modes](#), on page **34**.

Press the Select button to enter the service mode menu.

Use Up and Down buttons to scroll and the Select button to choose from the following service mode functions.

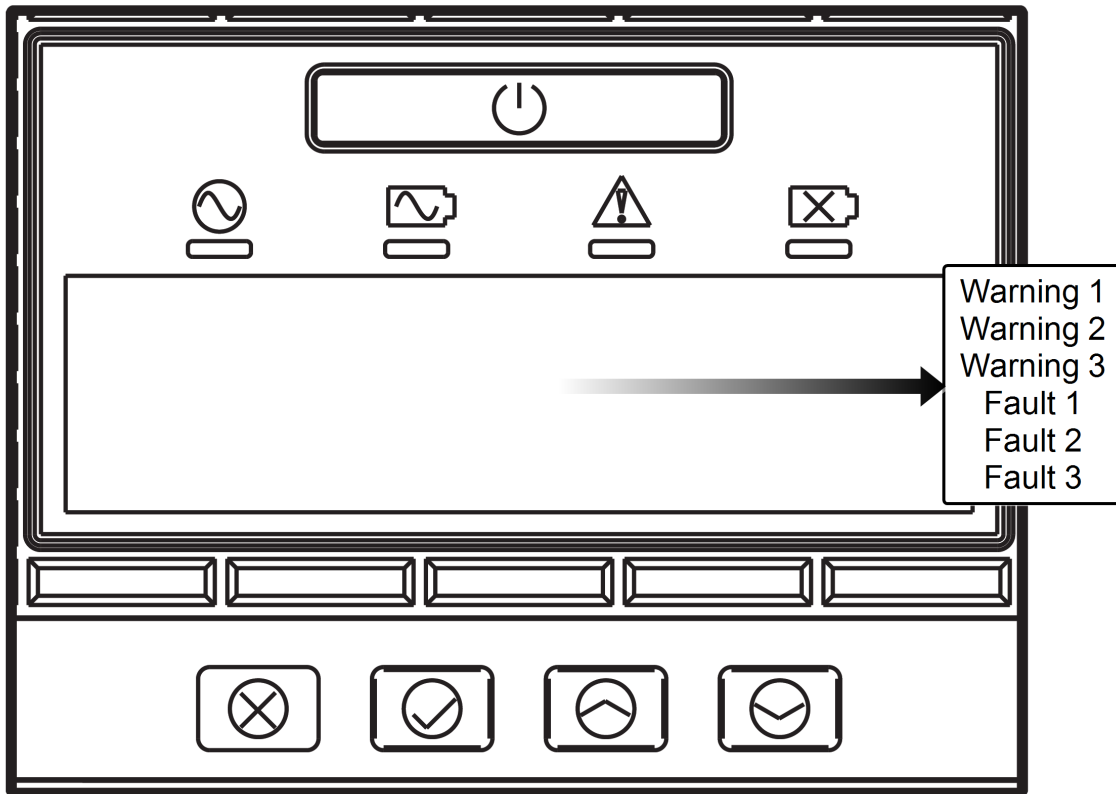
Function	Available Settings	Description
Power Mode	Normal, ECO Mode, Smart Mode, 50Hz Mode, 60Hz Mode	Select mode when in standby mode or bypass mode. For more information, see the off mode setting in <a href="#">Using Main Menu, Configuration Functions</a> , on page <a href="#">37</a> .
Output Voltage	110V, 120V, or 127V	Set the output of your UPS to one of the available voltage settings.
Load Control	Disable or Enable	When load control is enabled, you can turn the bank or outlets On or Off from the LCD screen, or from direct or remote connections. When disabled, all banks and outlets are locked in their current state.
Password Setup	0000 – 9999	Select a four-digit password from 0000 – 9999 to access and modify service mode function settings.
Fan Lock Detect	Enable or Disable	Enabled by default, this setting shows “Fan Failure - PLS replace fan.” on the LCD when the fan doesn't run or is locked. If you disable this setting, the LCD will not provide notifications when the fan doesn't run or is locked.
Autonomy time setting	000 – 999 minutes or 0 to Disable	Set the battery discharge time on your UPS from 0 – 999 minutes. Enter 0 to disable.


## Using Main Menu, Event Log Functions

Press the Select button to enter the event log menu.

The LCD screen shows the three most current Warning and Fault log messages for a total of 6 messages. Use Up and Down buttons to scroll through the log messages which appear on the screen in the order shown.

For more information, see [Using Front Panel Buttons and the LED Indicators](#), on page **33**.



 **NOTE** While the LCD shows the three most current Warning and Fault log messages, the following topics explain all the possible messages that could appear for each type.

### Understanding Warning Log Messages

The following are all the possible warnings and corresponding messages that may or may not appear as one of the three most current shown when scrolling through the event logs in the LCD screen.

Warning Message Shown on LCD	Reason for Message
UPS is overloaded.	Your UPS has already shut down or is about to shut down due to an overload condition. For more information, see <a href="#">Troubleshooting</a> , on page <b>52</b> .
Low Battery – Shutdown imminent.	Your battery capacity is low, and the UPS will shut down.
Battery Depleted	The battery power of your UPS is completely depleted.

Warning Message Shown on LCD	Reason for Message
Site Wiring Fault - PLS check input connection	A site wiring fault is detected. Please check the receptacle.
Fan Failure - PLS replace fan	A fan failure has occurred. For more information, contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.
High Internal Temperature	Your UPS has detected a high internal temperature, will shut down, and will not allow a manual restart until an acceptable temperature range is reached.
Charger Failure	A charger fault occurred in your UPS. The UPS will still operate; however, the battery is no longer being charged.
Bad Battery – PLS replace battery	Your UPS battery requires replacement. For more information, contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.
Turn off by EPO	Your UPS remote shutdown control has been activated.
Battery Disconnect	Your UPS is not connected to the battery. Please check the battery connection.
Internal Warning	Please shut down the UPS completely until the LCD panel is turned off, and then restart the UPS. For more information, contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.

## Understanding Fault Log Messages

The following are all the possible faults and corresponding messages that may or may not appear as one of the three most current shown when scrolling through the event logs in the LCD screen.

Fault Message Shown on LCD	Reason for Message
Output Short Circuit	A short circuit occurred in battery mode or line mode. Disconnect all equipment connected to your UPS. If the message still appears after disconnecting all connected equipment, contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.

Fault Message Shown on LCD	Reason for Message
Internal Bus Fault	An internal bus fault occurred in your UPS. Contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.
Inverter/Output Failure	An inverter fault occurred in your UPS. The UPS still operates in Line mode, but if it goes into Battery mode it will shut down. Contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.
UPS is overloaded	Your equipment requires more power than the UPS can provide. If the UPS is in Line Mode, then it will transfer to Bypass Mode; if the UPS is in Battery Mode, it will shut down. Shut off non-essential equipment. If this solves the overload problem, the UPS will transfer to normal operation.
High Internal Temperature	Your UPS has detected a high internal temperature, will shut down, and will not allow a manual re-start until an acceptable temperature range is reached.

## Viewing Main Menu, Information

Press the Select button to enter the information menu.

Use Up and Down buttons to scroll and the Select button to choose the device information you wish to view.




For more information, see [Using Front Panel Buttons and the LED Indicators](#), on page **33**.



**NOTE**

Device name, IPV4 address, and MAC address options and information are only available with the RackLink™ Network Card option (Model Number UPX-RLNK-CARD).

For more information, refer to the [RackLink Network Card User Manual \(100-00074\)](#) or contact support at [av.middleatlantic.techsupport@legrand.com](mailto:av.middleatlantic.techsupport@legrand.com) or (866) 977-3901.

Option	Information Shown
Device Name	<p>Displays the user setup name.</p> <div style="border: 1px solid black; padding: 5px;">  <p><b>NOTE</b> The Device Name only appears if you have the RackLink Network Card option installed and configured correctly.</p> </div>
UPS Model	Displays the UPS model name.
UPS Serial No	Displays the UPS serial number.
Battery Part No	Displays the UPS battery pack part number.
Battery Install Date	Displays the UPS battery installation date.
UPS Firmware	Displays the UPS firmware version number.
IPv4 Address	<p>Displays the IP address of the RackLink Network Card.</p> <div style="border: 1px solid black; padding: 5px;">  <p><b>NOTE</b> The IPv4 address only appears if you have the RackLink Network Card option installed and configured correctly.</p> </div>
MAC	<p>Displays the MAC address of the RackLink Network Card.</p> <div style="border: 1px solid black; padding: 5px;">  <p><b>NOTE</b> The MAC address only appears if you have the RackLink Network Card option installed and configured correctly.</p> </div>

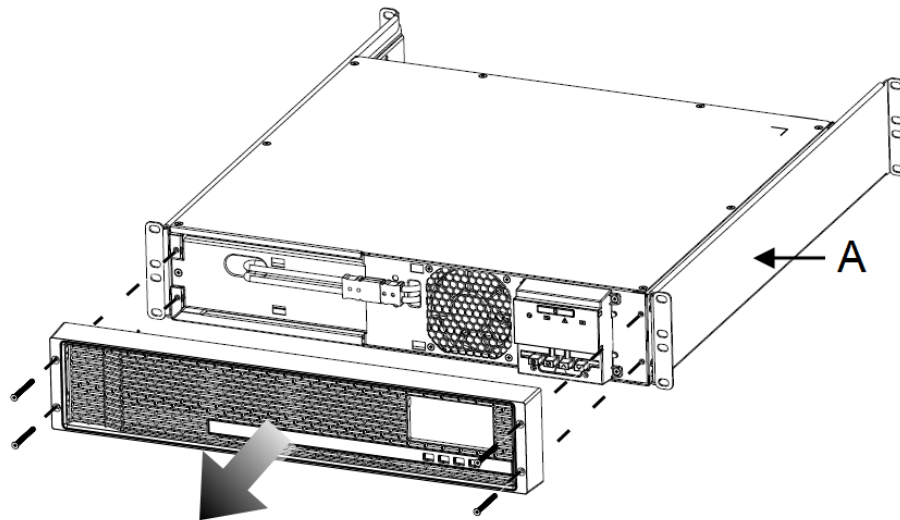
# Replacing the Battery



## NOTE

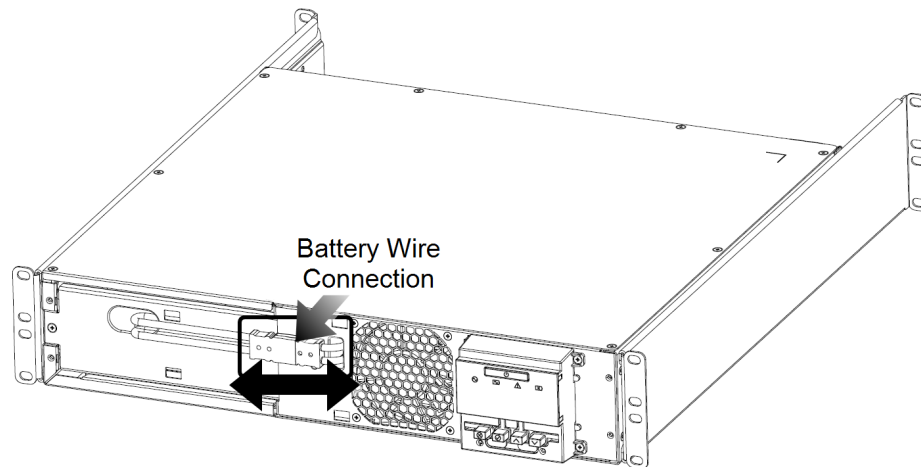
- The UPS (A) is equipped with a hot-swappable battery design; meaning, the battery may be replaced without shutting down the UPS or removing any connected loads. Replacement is a safe, isolated procedure.
- Images in this topic show a UPX-OL1000R-2 model UPS. Unless otherwise noted, minor appearance variations do not affect the procedures explained.

1. Use a #2 Phillips screwdriver and remove the (4x) screws from the front panel of the UPS (A) as shown.

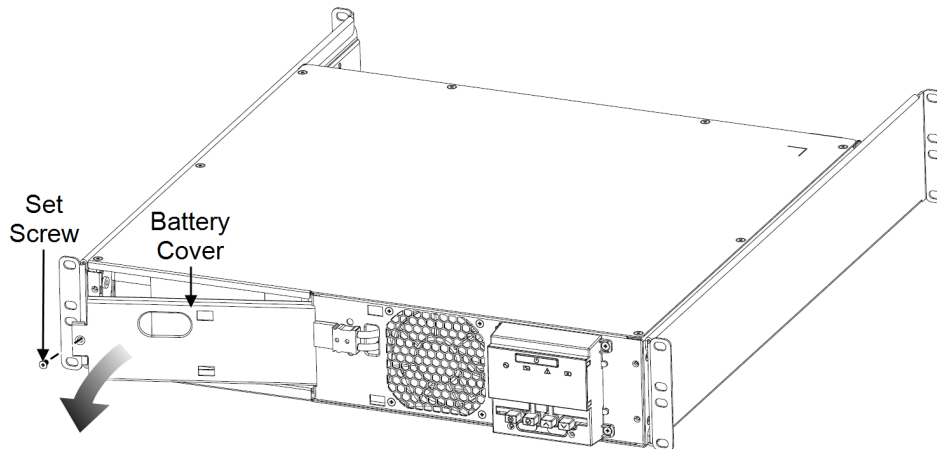


2. Remove the panel from the UPS and set it aside along with the screws for reattachment.

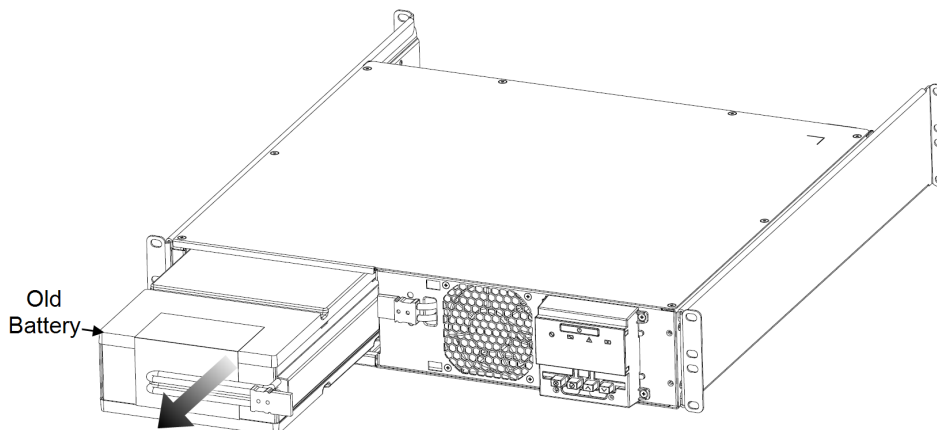
3. Squeeze and pull apart the battery wire connection and separate the wires as shown.




4. Use screwdriver to remove the set screw and battery cover as shown.



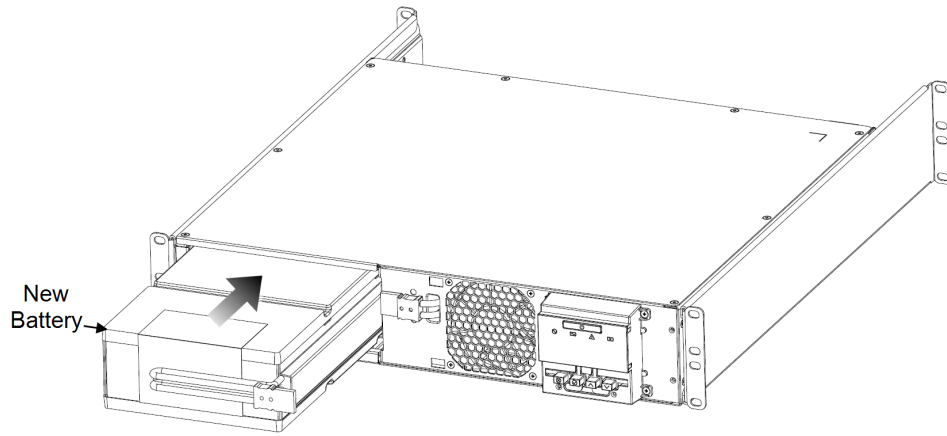
5. Slide the battery box out of the front opening.



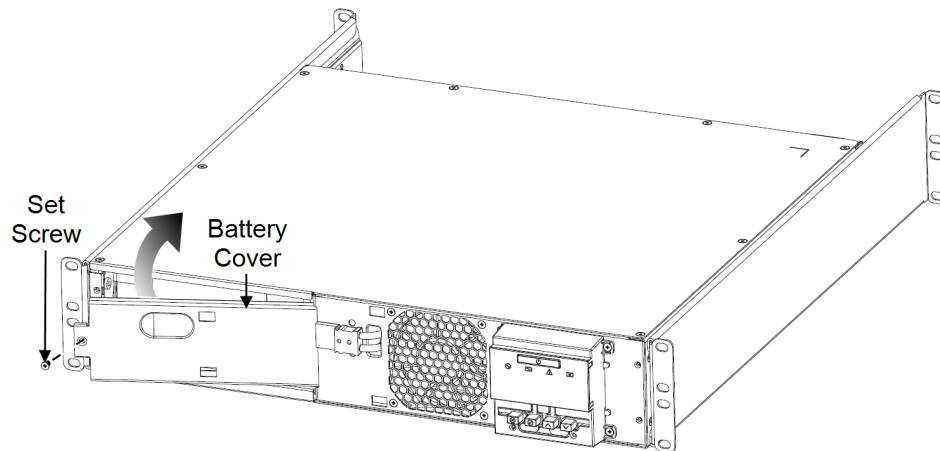
6. Use the box and pre-paid shipping label provided with your replacement battery and carefully pack and send the discharged battery to a recycling center. Otherwise, dispose or recycle your used battery in accordance with local laws and regulations.

 **NOTE** Discharged batteries are considered hazardous waste. They must be recycled or disposed of in accordance with all local laws and regulations or shipped to your dealer using replacement battery packaging, where applicable.

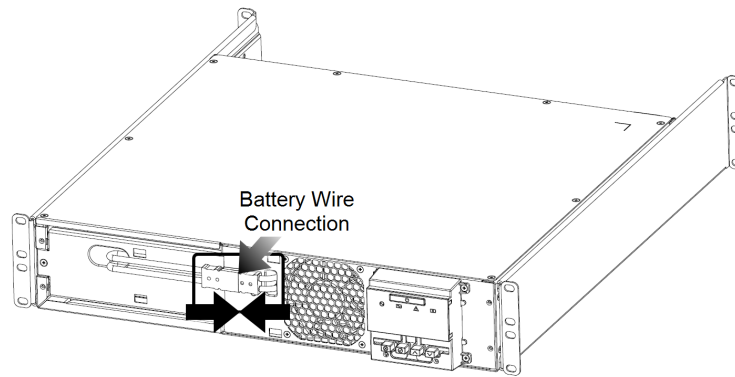
7. Slide your new battery into the front opening.



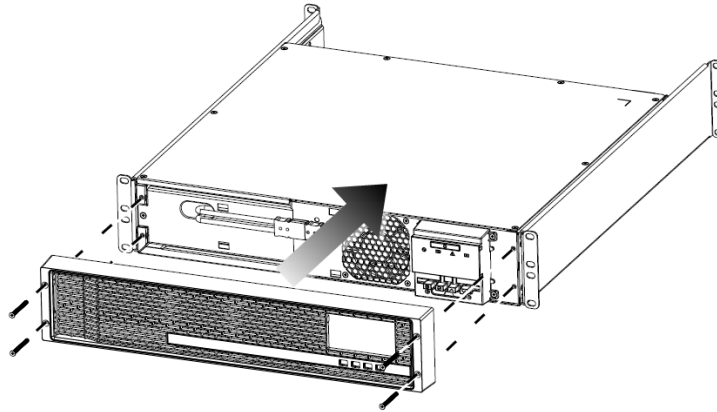
8. Use screwdriver and set screw to reattach the battery cover.



9. Reattach the battery wire connection as shown.



10. Use screwdriver and (4x) screws to reattach the front panel to your UPS as shown.

**NOTE**

After replacing the battery, the unit must be charged for eight hours before providing direct backup power to connected devices. For more information, see [Charging Your UPS the First Time](#), on page **15**.

11. Update the battery installation date that appears on the LCD in the Information menu using either the RackLink™ network card option or the manager software.  
For more information, see [Communicating with Your UPS](#), on page **23** and refer to the [UPS Manager Software User Manual \(100-00077\)](#) or the [RackLink Network Card User Manual \(100-00074\)](#).
12. On the LCD screen, select Yes as the coefficient to optimize your battery runtime calculation.  
For more information, see [Using Main Menu, Configuration Functions](#), on page **37**.

## Replacing the Power Cord (if Necessary)

**NOTE**

The 3K UPS models use a fixed, irreplaceable 10' (3.05M) cable to an L5-30P plug.

**WARNING**

Any power cord used with this device must meet the specifications listed in this topic.

**AVERTISSEMENT**

Tout câble d'alimentation utilisé avec cet appareil doit répondre aux spécifications répertoriées dans cette rubrique.

You may require a longer length cord for your specific UPS installation or just need a replacement. When replacing the cable with one from Legrand or any other supplier, the following specifications are required for 1K/1.5K UPS and 2K UPS products, respectively.

### Understanding Cord Replacement Specifications for the 1K/1.5K UPS

Only operate your UPS using a power supply cord meeting the following compliance standards and specifications.

- Detachable, complying with UL 62, 1581.
- NEMA 5-15P plug type complying with UL 817 and CSA 22.2 NO.21-95, 42M.
- Minimum wire size of SJT, 3/C, 16AWG, 221° F (105° C), 300V, VW-1.
- C13 connector complying with the IEC60320-1 standard.

### Understanding Cord Replacement Specifications for the 2K UPS

Only operate your UPS using a power supply cord meeting the following compliance standards and specifications.

- Detachable, complying with UL 62, 1581.
- NEMA 5-20P plug type complying with UL 817 and CSA 22.2 NO.21-95, 42M.
- Minimum wire size of SJT, 3/C, 12AWG, 221° F (105° C), 300V, VW-1.
- C19 connector complying with the IEC60320-1 standard.

# Troubleshooting

Problem	Possible Cause	Solution
<p>The UPS outlets do not provide power to connected equipment.</p>	<p>The AC input power cord is not properly connected.</p>	<p>Check your input power cord (C) is properly attached to the connector on the back of your UPS and into an appropriately rated receptacle.</p>
	<p>Your UPS battery power has discharged.</p>	<p>Recharge your UPS battery for at least 8 hours.</p>
	<p>Manual, Automatic, or Scheduled Load Shedding is enabled on your UPS.</p>	<p>Check the outlet state setting on the LCD menu. For more information, see <a href="#">Using Main Menu, Configuration Functions, Bank/Outlet</a>, on page <a href="#">40</a>.</p> <p>For more information, refer to the <a href="#">UPS Manager Software User Manual (100-00077)</a> or the <a href="#">RackLink Network Card User Manual (100-00074)</a>.</p>
<p>The UPS does not operate for the expected runtime duration.</p>	<p>The UPS battery is not fully charged.</p>	<p>Recharge your UPS battery for at least 8 hours.</p>
	<p>The battery needs to be replaced.</p>	<p>If you are still experiencing problems after your UPS has been charged a full eight hours, contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.</p>
<p>The UPS does not calculate the expected runtime for its connected expandable battery option.</p>	<p>The UPS is not configured to automatically detect the expandable battery.</p>	<p>Check that the external battery setting is configured to Auto. For more information, see <a href="#">Using Main Menu, Configuration Functions, External Battery</a>, on page <a href="#">40</a>.</p>
	<p>The main connector cord and communication cable are not properly connected between the UPS and the expandable battery.</p>	<p>Properly connect the main connector cord and the communication cable between the UPS and the expandable battery. For more information, see <a href="#">Connecting the Expandable Runtime Battery Option</a>, on page <a href="#">25</a>.</p>

Problem	Possible Cause	Solution
<p>The LCD display on your UPS indicates “UPS is overloaded.” or has already shutdown.</p>	<p>In Normal or Battery mode, the following shutdown time spans vary based on the following overload percentages:</p> <p>Line mode/Bypass mode:</p> <ul style="list-style-type: none"> <li>• A 105% overload sounds an alarm for 1 minutes then transfer to bypass.</li> <li>• A 115% overload sounds an alarm for 15 seconds then transfer to bypass.</li> <li>• A 130% overload sounds no alarm and immediate transfer to bypass immediate.</li> </ul> <p>Battery mode:</p> <ul style="list-style-type: none"> <li>• A 105% overload sounds an alarm for 1 minutes before shutdown.</li> <li>• A 115% overload sounds an alarm for 10 seconds before shutdown.</li> <li>• A 130% overload sounds no alarm and causes an immediate shutdown.</li> </ul>	<p>Reduce the load, and then press the power button to re-establish power to the UPS outlets. For more information, see <a href="#">Understanding the UPS Power Button</a>, on page <a href="#">35</a>.</p>

Problem	Possible Cause	Solution
The LCD display on your UPS indicates “High Internal Temperature.” or has already shutdown.	If a “High Internal Temperature” warning message appears, the UPS internal temperature was too high.	Press the power button to start the UPS. For more information, see <a href="#">Understanding the UPS Power Button</a> , on page <b>35</b> .  If the problem persists, contact support at <a href="mailto:av.middleatlantic.techsupport@legrand.com">av.middleatlantic.techsupport@legrand.com</a> or (866) 977-3901.

# Specifications

## General

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
UPS Topology	Online			
VA	1000VA	1500VA	2000VA	3000VA
Watts	1000W	1350W	1800W	2700W
Power Factor	1	0.9	0.9	0.9

## Input

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
Nominal Voltage	120VAC			
Voltage Range	100V~137V to 100% <100V de-rating to 60% <60V de-rating to 50% Linear Load			
Maximum Peak Load	15A	15A	20A	30A
Rated Load	9.2A	12.4A	16.5A	24.8A
Frequency	50/60Hz Autosensing			
Input Power Cord	SignalSAFE IEC to 5-15P 6' (1.8M)		SignalSAFE IEC to 5-20P 6' (1.8M)	Fixed 10' (3.05M) Cable to an L5-30P Plug
Electrical Supply System	TN system, TT			

## Output

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
Voltage Regulation	120VAC ( $\pm 1\%$ )			
Waveform (Battery Mode)	Pure Sine Wave			
Peak Rated Load	1000VA/1000W@127V 1000VA/1000W@120V 1000VA/1000W@110V	1500VA/1450W@127V 1500VA/1350W@120V 1350VA/1200W@110V	2000VA/1930W@127V 2000VA/1800W@120V 1800VA/1640W@110V	3000VA/2900W@127V 3000VA/2700W@120V 2700VA/2500W@110V
Nominal Voltage (Battery Mode)	120VAC (Adjustable from 110VAC, 120VAC, 127VAC)			
Rated Load	8.3A	11.25A	15A	22.5A
Frequency	50 Hz or 60 Hz ( $\pm 0.5$ Hz)			
Number of Outlets	8			7
Outlet Type	NEMA 5-15R		NEMA 5-20R	6 NEMA 5-20R 1 L5-30R
Surge Protection	540 Joules			
Overload Protection	Circuit Breaker			
Output Short Current	104A	144A	188A	170A
Transfer Time	(bypass $\leftrightarrow$ line mode) 4-6ms (line mode $\leftrightarrow$ battery mode) 0ms			

<b>Model</b>	<b>UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8</b>	<b>UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8</b>	<b>UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8</b>	<b>UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6</b>
Fan and Audible Noise	40dB @ 1m variable speed fan when load < 70%	45dB @ 1m variable speed fan when load < 70%		50dB @ 1m variable speed fan when load < 70%
BTUs (Bypass Mode)	54.56J	73.65J	98.21J	147.31J
BTUs (Line Mode)	381.92J	454.52J	634.26J	924.11J
BTUs (Battery Mode)	472.28J	572.88J	751.30J	1421.12J
Electrical Supply System	TN system, TT			

## Battery

<b>Model</b>	<b>UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8</b>	<b>UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8</b>	<b>UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8</b>	<b>UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6</b>
Battery Type	Sealed Maintenance-Free, Lead Acid Battery			
Recharge Time	6 hours			
Battery Replacement	Hot-Swappable Front Access			
Corresponding Replacement Battery Models	UPX-RPLBATT-E	UPX-RPLBATT-F	UPX-RPLBATT-C	UPX-RPLBATT-G
Battery Pack Voltage	24 VDC	48 VDC	48 VDC	72 VDC
Full- and Half-Load Runtimes	2   9 minutes	3   11 minutes		

## Expandable Runtime Battery Option (ERB)

<b>Model</b>	<b>UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8</b>	<b>UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8</b>	<b>UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8</b>	<b>UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6</b>
Composition	Lead Acid			
Recharge Time	6 hours			< 10 hours
Battery Replacement	Hot-Swappable Front Access			
Expandable Runtime Battery Model Numbers	UPX-EXPANRUN-OL10	UPX-EXPANRUN-OL15	UPX-EXPANRUN-OL20	UPX-EXPANRUN-OL30
Replacement Battery Model Numbers	UPX-RPLBATT-E (ERB requires two batteries.)	UPX-RPLBATT-F (ERB requires two batteries.)	UPX-RPLBATT-C (ERB requires two batteries.)	UPX-RPLBATT-G (ERB requires two batteries.)
UPS + 1 ERB Full- and Half-Load Runtimes	10   39 minutes	15   47 minutes	14   44 minutes	15   45 minutes
UPS + 2 ERB Full- and Half-Load Runtimes	20   78 minutes	30   91 minutes	28   84 minutes	31   87 minutes
UPS + 3 ERB Full- and Half-Load Runtimes	31   116 minutes	48   137 minutes	43   132 minutes	47   133 minutes
UPS + 4 ERB Full- and Half-Load Runtimes	42   163 minutes	66   190 minutes	60   174 minutes	66   179 minutes

## Environment

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
Storage Temperature (UPS)	5 °F (-15 °C) – 113 °F (45 °C)			
Operating Temperature (UPS)	32 °F (0 °C) – 104 °F (40 °C)			
Storage Temperature (Battery)	5 °F (-15 °C) – 104 °F (40 °C)			
Relative Humidity	0% – 95% Non-Condensing			
Max. Altitude	1000m without de-rating (Above 1000m, see <a href="#">Understanding UPS Installation Requirements</a> , on page <a href="#">16</a> .)			

## Communication

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
NEXSYS UPS Manager Software	Supports Windows® 7, 8, 10, and 11 and Windows Server 2008, 2012, 2016, and 2019, Windows 2008, 2012 Server Core, and Hyper-V 2008, 2012.			
Ports	USB, RS232, EPO, Dry Contacts, EXB Auto Detect, and NEXSYS UPS RackLink Network Card Option.  For more information, see <a href="#">Communicating with Your UPS</a> , on page <a href="#">23</a>			
Communication and Security Features for the RackLink Network Card Option (If Applicable)	SNMP V3, HTTP, HTTPS, TLS 1.2, SSH, Imbedded Web GUI with Dashboard, RADIUS, TCP/IP, Telnet, and FTP.  For more information, see <a href="#">Communicating with Your UPS</a> , on page <a href="#">23</a>			

## Control

Model	UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
Load Shedding Functionality	Bank 1 and 2 Programmable (Standard) Individual Outlets Programmable (Optional)			
Active On   Off	Manually turn power receptacles on or off using the front panel LCD or the UPS Manager Software.			
Scheduling	Fully programmable scheduling available for bank or outlet switching (based on the model purchased).			

## Front Panel Interface

Model	UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
Notification	LED = Standby Mode, Bypass Mode, Normal Online Mode, Battery Mode, ECO Mode, Frequency Converter Mode, and Smart Mode LCD = Various For more information, see <a href="#">Using Front Panel Buttons and the LED Indicators</a> , on page <a href="#">33</a> and <a href="#">Operating the LCD Main Menu</a> , on page <a href="#">37</a> .			
Audible Alarms	On Battery, Low Battery, Battery Disconnected, Fault, or Overload.			

## Physical

Model	UPX-OL1000R-2 UPX-RLNK-OL1000R-2 UPX-RLNK-OL1000R-8	UPX-OL1500R-2 UPX-RLNK-OL1500R-2 UPX-RLNK-OL1500R-8	UPX-OL2000R-2 UPX-RLNK-OL2000R-2 UPX-RLNK-OL2000R-8	UPX-OL3000R-2 UPX-RLNK-OL3000R-2 UPX-RLNK-OL3000R-6
Dimensions Width x Height x Depth	17.3" (440mm) x 3.4" (86.5mm) x 17.3" (440mm)			17.3" (440mm) x 3.4" (86.5mm) x 23.6" (600mm)
Product Weight	33.1 lbs. (15kg)	44.7 lbs. (20.3kg)	45.2 lbs. (20.5kg)	64.2 lbs. (29.1kg)
Shipping Weight	46.4 lbs. (21kg)	57.9 lbs. (26.3kg)	58.4 lbs. (26.5kg)	78.26 lbs. (35.5kg)

## Certifications

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2	UPX-RLNK-OL1500R-2	UPX-RLNK-OL2000R-2	UPX-RLNK-OL3000R-2
	UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-6
Safety Standards	cTUVus Certified to UL 1778 & CSA C22.2 no. 107.3 standards, IEC 62040.			
EMI Standards	FCC Class A			
Environmental	RoHS 3 REACH Compliant			
Energy Efficiency	Energy Star 2.0, CEC (California Energy Commission), and DOE (U.S. Department of Energy).			
IP Rating for Enclosure	IP20			
Overvoltage Category	OVC II			

## Features

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2	UPX-RLNK-OL1500R-2	UPX-RLNK-OL2000R-2	UPX-RLNK-OL3000R-2
	UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-6
Load Shedding	Yes (Bank)			
Site Fault Detection	Yes			
Cold Start	Yes			

## Warranty

Model	UPX-OL1000R-2	UPX-OL1500R-2	UPX-OL2000R-2	UPX-OL3000R-2
	UPX-RLNK-OL1000R-2	UPX-RLNK-OL1500R-2	UPX-RLNK-OL2000R-2	UPX-RLNK-OL3000R-2
	UPX-RLNK-OL1000R-8	UPX-RLNK-OL1500R-8	UPX-RLNK-OL2000R-8	UPX-RLNK-OL3000R-6
Standard	Three Years Limited (2 Years Battery) For warranty information, refer to <a href="http://www.legrandav.com/policies/warranty-information">www.legrandav.com/policies/warranty-information</a> .			

# System Function Block Diagram

As shown in the following diagrams, the UPS is composed of a mains input, EMI/RFI filters, inverter, battery charger, DC-to-DC converter, battery, and UPS output.

Diagram for UPS models with 2 banks of controlled outlets.

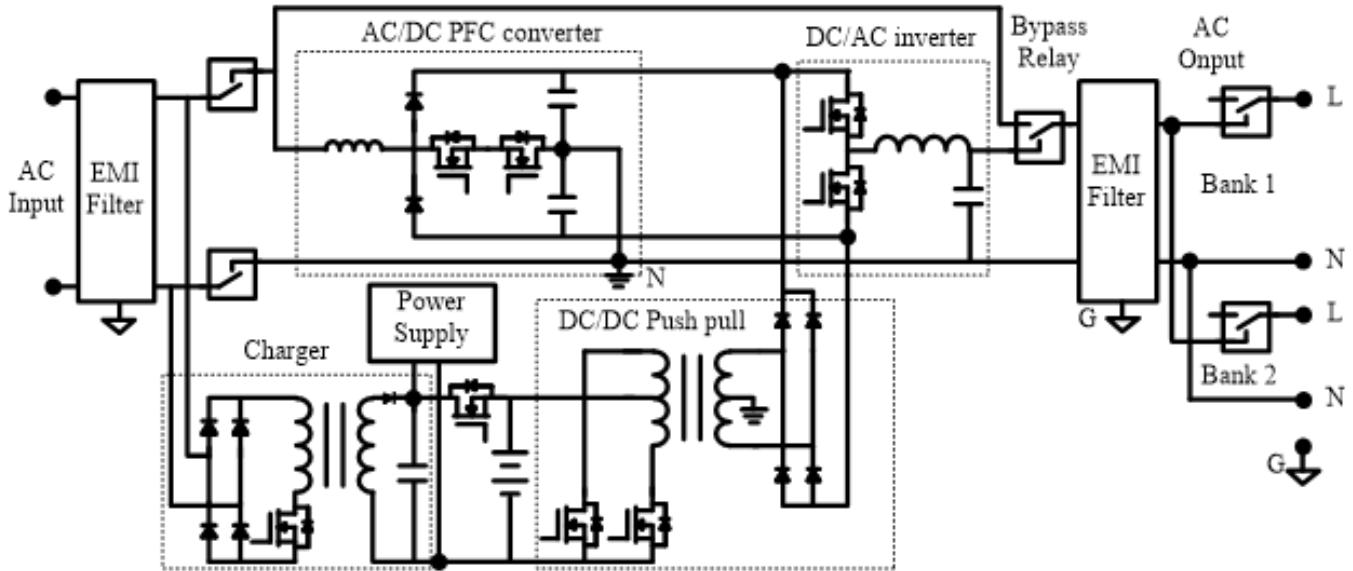
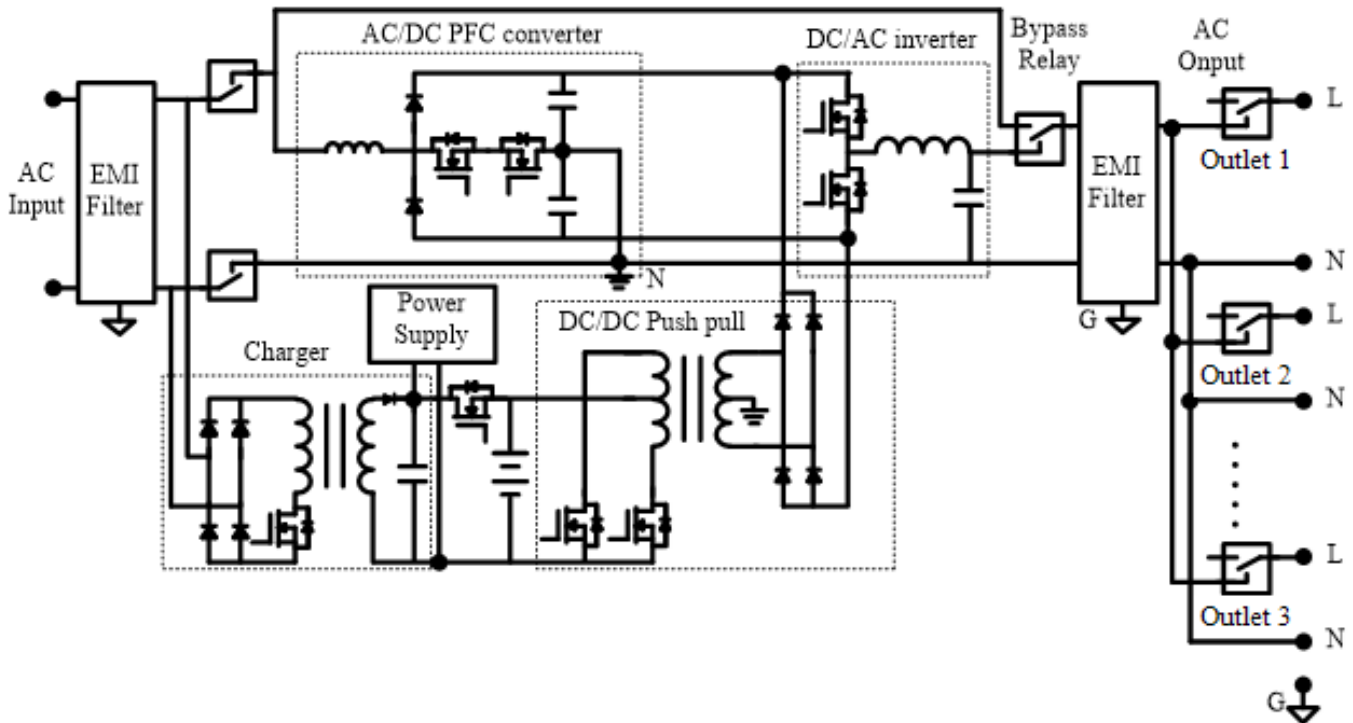


Diagram for UPS models with 8 individually controlled outlets.



# Warranty

For warranty information, refer to [www.legrandav.com/policies/warranty\\_information](http://www.legrandav.com/policies/warranty_information).

## Contacting Corporate Headquarters

P: (866) 977-3901 | F: (877) 894-6918 | [www.legrandav.com](http://www.legrandav.com) | [av.middleatlantic.techsupport@legrand.com](mailto:av.middleatlantic.techsupport@legrand.com)

## Contacting Middle Atlantic Canada

P: (888) 766-9770 | F: (888) 599-5009 | [www.legrandav.com](http://www.legrandav.com) | [av.canada.customerservice@legrand.com](mailto:av.canada.customerservice@legrand.com)

### United States (US)

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At Legrand AV Inc. we are always listening. Your comments are welcome.

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