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# Installation Guide Symmetra® LX Tower Rack-Mount

UPS Models 200 V, 4-8 kVA 208/240 V, 4-8 kVA 220/230/240 V, 4-8 kVA

200 V, 4-16 kVA 208/240 V, 4-16 kVA 220/230/240 V, 4-16 kVA

# **Important Safety Messages**

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the APC<sup>TM</sup> by Schneider Electric equipment and batteries.

Read the instructions carefully. Become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this document or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning product safety label indicates that an electrical hazard exists that will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

## 🛦 DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

## **WARNING**

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

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CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

# NOTICE

NOTICE is used to address practices not related to physical injury.

# **Product Handling Guidelines**















# **Safety and General Information**

# Inspect the package contents upon receipt. Notify the carrier and dealer if there is any damage.

- This equipment is for use in a restricted access location.
- Adhere to all national and local electrical codes.
- All wiring must be performed by a qualified electrician.
- Do not work alone under hazardous conditions.
- Changes and modifications to this unit not expressly approved by Schneider Electric IT Corporation could void the warranty.
- This UPS is intended for indoor use only.
- Do not operate this unit in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- For a UPS with a factory installed power cord, connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- The batteries are heavy. Remove the batteries before installing the UPS and external battery packs (XLBPs), in a rack.
- Always install XLBPs at the bottom in rack-mount configurations. The UPS must be installed above the XLBPs.
- Always install peripheral equipment above the UPS in rack-mount configurations.

#### **Electrical safety**

- Do not handle any metallic connector before power has been disconnected.
- For models with a hardwired input, the connection to the branch circuit (mains) must be performed by a qualified electrician.
- 230 V models only: In order to maintain compliance with the EMC directive for products sold in Europe, output cords attached to the UPS must not exceed 10 meters in length.
- The protective earth conductor for the UPS carries the leakage current from the load devices (computer equipment). An insulated ground conductor is to be installed as part of the branch circuit that supplies the UPS. The conductor must have the same size and insulation material as the grounded and ungrounded branch circuit supply conductors. The conductor will typically be green, with or without a yellow stripe.
- Leakage current for a pluggable, Type A UPS may exceed 3.5 mA when a separate ground terminal is used.
- The UPS input ground conductor must be properly bonded to protective earth at the service panel.
- If the UPS input power is supplied by a separately derived system, the ground conductor must be properly bonded at the supply transformer or motor generator set.

#### Hardwire safety

- Check that all branch circuit (mains) and low voltage (control) circuits are deenergized, and locked out before installing cables or making connections, whether in the junction box or to the UPS.
- All wiring must be performed by a qualified electrician.
- Select wire size and connectors according to national and local codes.
- Wiring must be approved by a local wiring inspector.
- Strain relief is required for all hardwiring (supplied with select products). Snap in type strain reliefs are recommended.
- All openings that allow access to UPS hardwire terminals must be covered. Failure to do so may result in personal injury or equipment damage.

#### **De-energizing safety**

- The UPS contains internal batteries and may present a shock hazard even when disconnected from AC and DC power.
- The AC and DC output connectors may be energized by remote or automatic control at any time.
- Before installing or servicing the equipment perform the following tasks:
  - Set the System enable switch to the OFF position.
  - Set the input circuit breaker to the OFF position.
  - Disconnect the battery modules.
  - Disconnect external battery cabinet if provided.
  - Disconnect mains/branch circuit.

#### **Battery safety**

- When replacing batteries, replace with the same number and type.
- Batteries typically last for two to five years. Environmental factors impact battery life. Elevated ambient temperatures, poor quality utility power, and frequent short duration discharges will shorten battery life. Batteries should be replaced before end of life.
- Replace batteries immediately when the unit indicates battery replacement is necessary.
- APC <sup>TM</sup> by Schneider Electric uses Maintenance-Free sealed Lead Acid batteries. Under normal use and handling, there is no contact with the internal components of the battery. Over charging, over heating or other misuse of batteries can result in a discharge of battery electrolyte. Released electrolyte is toxic and may be harmful to the skin and eyes.
- CAUTION: Before installing or replacing the batteries, remove jewelry such as chains, wristwatches and rings. Use tools with insulated handles. High short circuit current through conductive materials could cause severe burns.
- 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.

#### **General information**

- The model and serial numbers are located on a small, rear panel label. For some models, an additional label is located on the chassis under the front bezel.
- Always recycle used batteries.
- Recycle the package materials or save them for reuse.

# Installation

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#### **RISK OF ELECTRIC SHOCK**

- Adhere to all national and local electrical codes.
- · Wiring must be performed by a qualified electrician.
- Read and follow all safety and installation instructions in this manual.

Failure to follow these instructions could result in equipment damage, personal injury or death.

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#### **RISK OF ELECTRIC SHOCK**

- Disconnect the electrical panel circuit breaker before installing or servicing the unit or connected equipment.
- · Disconnect equipment from the unit before servicing any equipment.
- The AC and DC output connectors may be energized by remote or automatic control at any time.
- Do not use the UPS as a safety disconnect.

Failure to follow these instructions could result in minor or moderate injury.

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#### **RISK OF DROPPED OR FALLING EQUIPMENT**

- The equipment is heavy. Practice correct lifting techniques adequate for the weight of the equipment.
- Two people should lift the frame and slide it into the rack.
- Secure the frame in the rack before installing the power modules and the external battery modules (XLBPs).
- Once the frame is secured in the rack, do not move the rack.
- · Install the power modules at the bottom of the rack.
- Install the above the external battery modules (XLBPs) above the power modules.
- Secure the units in the frame using all of the screws supplied for this purpose.

Failure to follow these instructions could result in equipment damage and minor or moderate injury.

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#### **RISK OF DROPPED OR FALLING EQUIPMENT**

- The equipment is heavy. Practice correct lifting techniques adequate for the weight of the equipment.
- Do not move the rack once the frame, power modules, XLBPs are installed.

Failure to follow these instructions could result in equipment damage and minor or moderate injury.

# **Rack placement**

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#### RISK OF DROPPED OR FALLING EQUIPMENT

- The equipment is heavy. Practice correct lifting techniques adequate for the weight of the equipment.
- Place the rack in the location where the equipment will be used.
- Do not move the rack once the frame, power modules, XLBPs are installed.

Failure to follow these instructions could result in equipment damage and minor or moderate injury.

# **Unpack Symmetra LX**

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#### **RISK OF DROPPED OR FALLING EQUIPMENT**

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Failure to follow these instructions could result in equipment damage and minor or moderate injury.



# **Install Rails in Rack**

### Install the clip nuts

Align the bottom of the cardboard ruler that ships with the frame with the bottom of the rack front posts. Mark the locations for the clip nuts on the rack front posts. 8 kVA UPS: Holes 15, 24, 38 16 kVA UPS: Holes 15, 24, 33, 42, 48,56 Snap the clips onto the marked holes on the rack posts.

#### Install the rails



# **Install Frame in Rack**

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#### RISK OF DROPPED OR FALLING EQUIPMENT

- The equipment is heavy. Practice correct lifting techniques adequate for the weight of the equipment.
- Two people should lift the frame and slide it into the rack.
- Secure the frame in the rack before installing the power modules and the external battery modules (XLBPs)
- Once the frame is secured in the rack, do not move the rack.
- Install the power modules at the bottom of the rack.
- Install the above the external battery modules (XLBPs) above the power modules.
- Secure the units in the frame using all of the screws supplied for this purpose.

Failure to follow these instructions could result in equipment damage and minor or moderate injury.



# **Install Power Modules in Frame**

## The Symmetra LX can utilize multiple power modules



# **Install Battery Modules in Frame**

### The Symmetra LX can utilize multiple battery modules

| The battery modules should be installed in the compartments on the right side of the frame.               |  |
|---|--|
| The battery modules should be installed with the handles toward the top and right hand side of the frame. |  |
| Slide the battery module into the bottom, right frame compartment   |  |
| The front of the module should seat behind the frame safety catches.                                      |  |
| Install additional battery modules from the bottom of the frame up.                                       |  |
| Use a coin to turn each battery switch counter clockwise to the ON position.                              |  |
| Replace the bezel on the front of the frame,  |  |
| The top corners of the bezel are magnetized.  |  |
| Line up the top magnetic corners on the bezel with the front of the frame.                                |  |
| The magnets will engage when the bezel and the frame are aligned correctly.                               |  |

# APC<sup>™</sup> by Schneider Electric Worldwide Customer Support

Customer support for this or any other Symmetra® by Schneider Electric product is available at no charge in any of the following ways:

- Visit the APC by Schneider Electric web site, www.apc.com to access documents in the APC Knowledge Base and to submit customer support requests.
  - www.apc.com (Corporate Headquarters)
    Connect to localized APC by Schneider Electric web site for specific countries, each of which provides customer support information.
  - www.apc.com/support/ Global support searching APC Knowledge Base and using e-support.
- Contact the APC by Schneider Electric Customer Support Center by telephone or e-mail.
  - Local, country specific centers: go to www.apc.com/support/contact for contact information.
  - For information on how to obtain local customer support, contact the APC by Schneider Electric representative or other distributor from whom you purchased your APC by Schneider Electric product.

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