

Symmetra[®] LX Safety Instructions and General Information Guide

For use with models:

200 V, 4–8 kVA
208/240 V, 4–8 kVA
220/230/240 V, 4–8 kVA

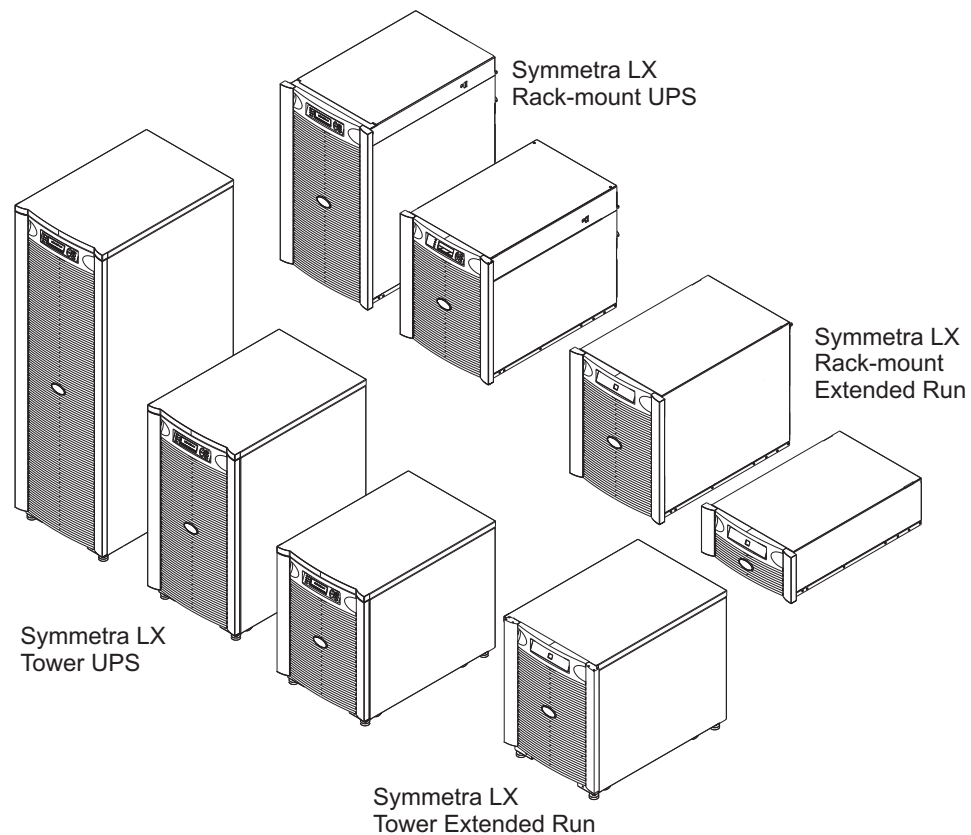
200 V, 4–16 kVA
208/240 V, 4–16 kVA
220/230/240 V, 4–16 kVA

Important Safety and Installation Instructions

This manual provides important safety instructions and general information pertaining to the Symmetra LX tower and rack-mount UPS and optional Extended Run Cabinet. Illustrations are representative. Your Symmetra LX configuration, including components and optional APC equipment, may be different from the models shown in this guide.

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Safety Instructions

Read and understand this manual before installing, operating or maintaining APC equipment.

General Equipment Safety



Electrical Hazard

- Read, understand and follow ALL safety instructions contained in this manual. Failure to follow safety instructions and warnings could result in equipment damage, serious injury, or death.
- Connection to the branch circuit (mains) must be performed by a licensed electrician.
- Do not use any module as a step or stool.

Handling Safety



Electrical Hazard

Do not lift heavy loads without assistance.



<40 lb.
<18 kg



40–70 lb
18–32 kg



70–120 lb
32–54 kg



>120 lb
>54 kg



Note

This equipment is intended for installation in a temperature-controlled indoor area free of conductive contaminants. Refer to Specifications at the APC web site for the actual temperature range.

De-energizing Safety



Electrical Hazard

The UPS contains internal batteries and may present a shock hazard even when disconnected from the branch circuit (mains). Before installing or servicing the equipment, ensure that the system enable switch and input circuit breaker are set to stand-by (OFF), that internal battery modules are removed, that external extended run batteries are disconnected and the branch circuit (mains) is disconnected.

Electrical Safety



Electrical Hazard

- 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 be green and with or without a yellow stripe.
- The grounding conductor described above is to be grounded to earth at the service equipment, or if supplied by a separately derived system, at the supply transformer or motor-generator set.
- The attachment-plug receptacles near the unit or subsystem are all to be of a grounding type, and the grounding conductors serving these receptacles are to be connected to earth ground at the service equipment.

Battery Safety



Electrical Hazard

- Each battery module is a 120 V, 9.0 Ah battery pack. There is a risk of energy hazard. Before installing or replacing the battery module(s), remove jewelry such as wristwatches and rings. High short-circuit current through conductive materials could cause severe burns.
- Do not dispose of batteries in a fire. The batteries may explode.
- Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes, and may be toxic.



Caution

- Store the battery module(s) at a cool ambient temperature of < 25 °C.
- Storage of batteries longer than six months without recharging may result in permanent damage.



Note

- To comply with FAA regulations, the battery modules are shipped disconnected from the UPS.
- Batteries are recyclable. Used batteries can be sent to APC for recycling or delivered to a recycling facility.
- Only use APC batteries when adding or replacing battery modules in the UPS.

Hardwiring Safety



Electrical Hazard

Verify that all branch circuit (mains) and low voltage (control) circuits are de-energized, and locked out before installing cables or making connections, whether in the junction box or to the UPS.



Caution

- Wiring by a qualified electrician is required.
- Check national and local codes before wiring.
- Strain relief is required for all hardwiring.
- All openings in the rear of the UPS must be covered. Failure to do so may result in personal injury or equipment damage.
- Select wire size and connectors according to national and local codes.



Note

- Loads can be connected directly to the UPS using the output plugs on the PDU panel. Ensure that the total load being plugged into a PDU panel DOES NOT EXCEED the branch circuit breaker rating on the PDU panel.
- Extended Run models: If a warning label is affixed to the bottom PDU area, do not install a PDU panel at this location.
- Use flexible metal conduit to make maintenance and service easier.

Safety Instructions (continued)

Remote Emergency Power Off (REPO)

The output power can be disabled in an emergency by closing a switch connected to the REPO circuit. You must manually reset the system enable switch on the front of the UPS to restart the unit.



Caution

- ❑ The REPO circuit is considered a Class 2 (UL and CSA standards) and SELV (IEC standard) circuit.
- ❑ **Class 2 Circuit:** Used in North America by UL and CSA. It is defined in the National Electrical Code (NFPA 70, Article 725) and in the Canadian Electrical Code (C22.1, Section 16).
- ❑ **SELV Circuit:** Used in Europe by IEC; acronym for "safety extra low voltage." A SELV circuit is isolated from primary circuitry through an isolating transformer and designed so that under normal conditions, the voltage is limited to 42.4 V peak or 60 V dc.
- ❑ Both Class 2 and SELV circuits must be isolated from all primary circuitry. Do not connect any circuit to the REPO terminal block unless it can be confirmed that the circuit is SELV or Class 2. If there is a question, use a contact closure switch.
- ❑ Use one of the following cable types to connect the UPS to the
 - CL2: Class 2 cable for general use.
 - CL2P: Plenum cable for use in ducts, plenums, and other spaces used for environmental air.
 - CL2R: Riser cable for use in a vertical run in a shaft of from floor to floor.
 - CLEX: Limited use cable for use in dwellings and for use in raceways.
 - For installation in Canada: Use only CSA Certified, type ELC (extra-low voltage control cable).

General Information

This section contains general information pertaining to Symmetra equipment. Please read and understand the information contained in this section before installing or operating APC equipment.

Contact Information

Visit the APC Web site for contact numbers and support at <http://www.apc.com/support>.

Regulatory Agency Approvals

200/208 V



LISTED 42C2
E96563



LR63938

220/230/240 V



N 394



Radio Frequency Interference

North America and 208 V Countries

- ❑ This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the Federal Communications Commission (FCC) rules and the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications (CDC). 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 interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- ❑ Use shielded signal cables with this product to ensure compliance with Class A FCC limits.

Europe and 230 V Countries

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take corrective actions.

Japan and 200 V Countries

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

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Limited Warranty

American Power Conversion (APC) warrants its products to be free from defects in materials and workmanship for a period of two years from the date of purchase, except in India where the period is one year for battery module(s). Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support (see Service in the *Symmetra® LX Operations Manual*). Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

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