Bottom Entry Cabinet

For Galaxy VL and Easy UPS 3L

Installation

GVBEC

Latest updates are available on the Schneider Electric website
5/2021

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Important Safety Instructions — SAVE THESE INSTRUCTIONS

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service or maintain it. The following safety messages may appear throughout this manual 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” safety message indicates that an electrical hazard exists which 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 with 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.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

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

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠ CAUTION

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

Failure to follow these instructions can result in injury or equipment damage.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this type of safety message.

Failure to follow these instructions can result in equipment damage.

Please Note

Electrical equipment should only be installed, operated, serviced, and maintained by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Safety Precautions

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Read all instructions in the installation manual before installing or working on this product.

Failure to follow these instructions will result in death or serious injury.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not install the product until all construction work has been completed and the installation room has been cleaned.

Failure to follow these instructions will result in death or serious injury.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The product must be installed according to the specifications and requirements as defined by Schneider Electric. It concerns in particular the external and internal protections (upstream breakers, battery breakers, cabling, etc.) and environmental requirements. No responsibility is assumed by Schneider Electric if these requirements are not respected.

Failure to follow these instructions will result in death or serious injury.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The UPS system must be installed according to local and national regulations. Install the UPS according to:

- IEC 60364 (including 60364–4–41- protection against electric shock, 60364–4–42 - protection against thermal effect, and 60364–4–43 - protection against overcurrent), **or**
- NEC NFPA 70, **or**
- Canadian Electrical Code (C22.1, Part 1)

depending on which one of the standards apply in your local area.

Failure to follow these instructions will result in death or serious injury.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Install the product in a temperature controlled indoor environment free of conductive contaminants and humidity.
- Install the product on a non-flammable, level and solid surface (e.g. concrete) that can support the weight of the system.

Failure to follow these instructions will result in death or serious injury.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The product is not designed for and must therefore not be installed in the following unusual operating environments:

- Damaging fumes
- Explosive mixtures of dust or gases, corrosive gases, or conductive or radiant heat from other sources
- Moisture, abrasive dust, steam or in an excessively damp environment
- Fungus, insects, vermin
- Salt-laden air or contaminated cooling refrigerant
- Pollution degree higher than 2 according to IEC 60664-1
- Exposure to abnormal vibrations, shocks, and tilting
- Exposure to direct sunlight, heat sources, or strong electromagnetic fields

Failure to follow these instructions will result in death or serious injury.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not drill or cut holes for cables or conduits with the gland plates installed and do not drill or cut holes in close proximity to the UPS.

Failure to follow these instructions will result in death or serious injury.

⚠⚠WARNING

HAZARD OF ARC FLASH

Do not make mechanical changes to the product (including removal of cabinet parts or drilling/cutting of holes) that are not described in the installation manual.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

NOTICE

RISK OF OVERHEATING

Respect the space requirements around the product and do not cover the ventilation openings when the product is in operation.

Failure to follow these instructions can result in equipment damage.

Additional Safety Precautions After Installation

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not install the UPS system until all construction work has been completed and the installation room has been cleaned. If additional construction work is needed in the installation room after this product has been installed, turn off the product and cover the product with the protective packaging bag the product was delivered in.

Failure to follow these instructions will result in death or serious injury.

Electrical Safety

This manual contains important safety instructions that should be followed during the installation and maintenance of the UPS system.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Electrical equipment must be installed, operated, serviced, and maintained only by qualified personnel.
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- Disconnection devices for AC and DC must be provided by others, be readily accessible, and the function of the disconnect device marked for its function.
- Turn off all power supplying the UPS system before working on or inside the equipment.
- Before working on the UPS system, check for hazardous voltage between all terminals including the protective earth.
- The UPS contains an internal energy source. Hazardous voltage can be present even when disconnected from the mains supply. Before installing or servicing the UPS system, ensure that the units are OFF and that mains and batteries are disconnected. Wait five minutes before opening the UPS to allow the capacitors to discharge.
- The UPS must be properly earthed/grounded and due to a high leakage current, the earthing/grounding conductor must be connected first.

Failure to follow these instructions will result in death or serious injury.

The label below must be added if:

1. The UPS input is connected through external isolators that, when opened, isolate the neutral, OR
2. The UPS input is connected via an IT power system.

The label must be placed adjacent to all upstream power disconnection devices that isolate the neutral.

⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Risk of voltage backfeed. Before working on this circuit: Isolate the UPS and check for hazardous voltage between all terminals including the protective earth.

Failure to follow these instructions will result in death or serious injury.

Specifications

NOTICE
HAZARD OF EQUIPMENT DAMAGE Refer to the UPS installation manual for detailed specifications for the UPS system. **Failure to follow these instructions can result in equipment damage.**

Maximum Short Circuit Rating for Galaxy VL

The Galaxy VL UPS is rated for use on a circuit capable of delivering no more than 45 kAIC/kA Icw, with the bottom entry cabinet (GVBEC) installed.

Bottom Entry Cabinet Weight and Dimensions

Commercial reference	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
GVBEC	85 (187.39)	1970 (77.55)	400 (15.74)	850 (33.46)

Torque Specifications

Bolt size	Torque
M6	5 Nm (3.69 lb-ft / 44.3 lb-in)
M8	17.5 Nm (12.91 lb-ft / 154.9 lb-in)
M10	30 Nm (22 lb-ft / 194.7 lb-in)
M12	50 Nm (36.87 lb-ft / 442.5 lb-in)

Environment

	Operating	Storage
Temperature	0 °C to 40 °C (32 °F to 104 °F)	-25 °C to 55 °C (-13 °F to 131 °F)
Relative humidity	0-95% non-condensing	0-95% non-condensing
Protection class	IP20	
Color	RAL 9003, gloss level 85%	

Installation Procedure for Galaxy VL UPS with Bottom Entry Cabinet

NOTE: All power cables and signal cables can be routed through the bottom entry cabinet and connected in the UPS.

1. Install the Seismic Anchoring with the Galaxy VL UPS (Option), page 12.
2. Install the Bottom Entry Cabinet with the Galaxy VL UPS, page 14.
3. Follow the UPS installation manual to connect the power cables and the signal cables and to complete the rest of the UPS installation.

Installation Procedure for Easy UPS 3L with Bottom Entry Cabinet

NOTE: All power cables and signal cables can be routed through the bottom entry cabinet and connected in the UPS.

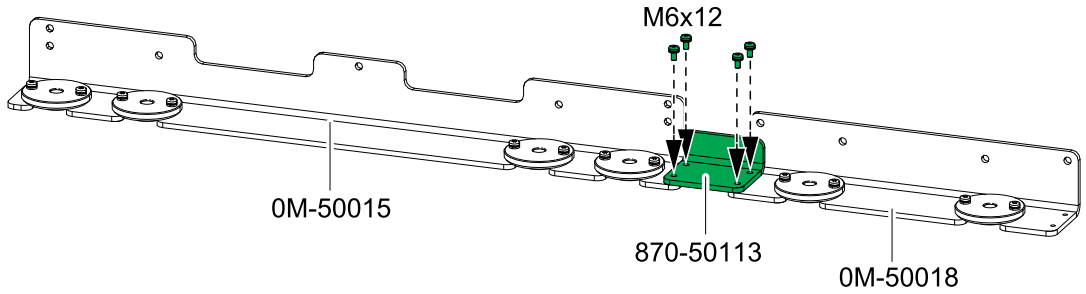
1. Install the Bottom Entry Cabinet with the Easy UPS 3L, page 22.
2. Follow the UPS installation manual to connect the power cables and the signal cables and to complete the rest of the UPS installation.

Install the Seismic Anchoring with the Galaxy VL UPS (Option)

Use the optional seismic kit GVLOPT002 for this procedure.

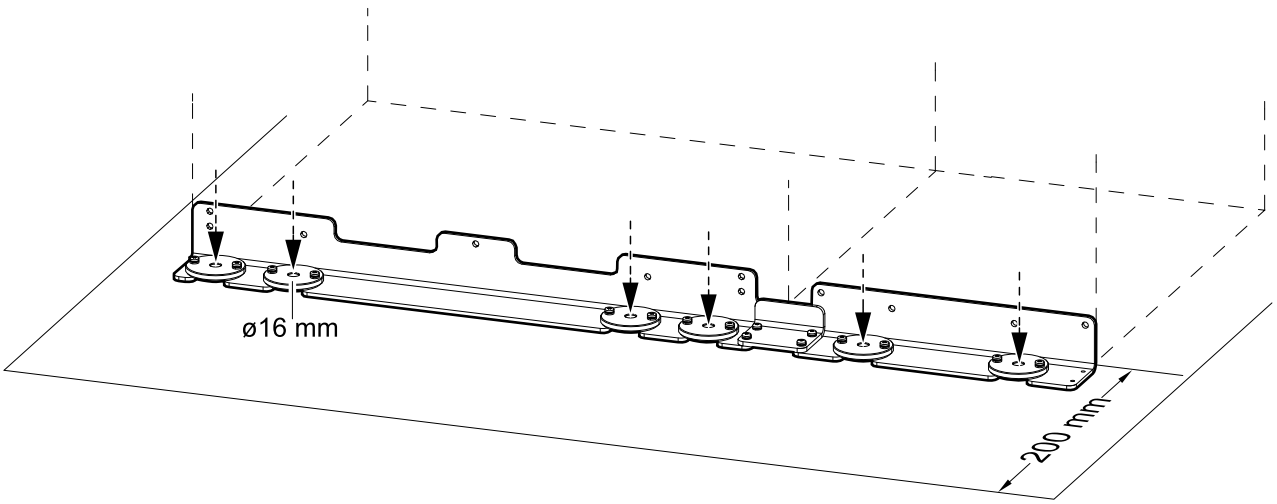
1. Connect the rear anchoring assemblies for the UPS and the bottom entry cabinet with the interconnection plate.

Rear View



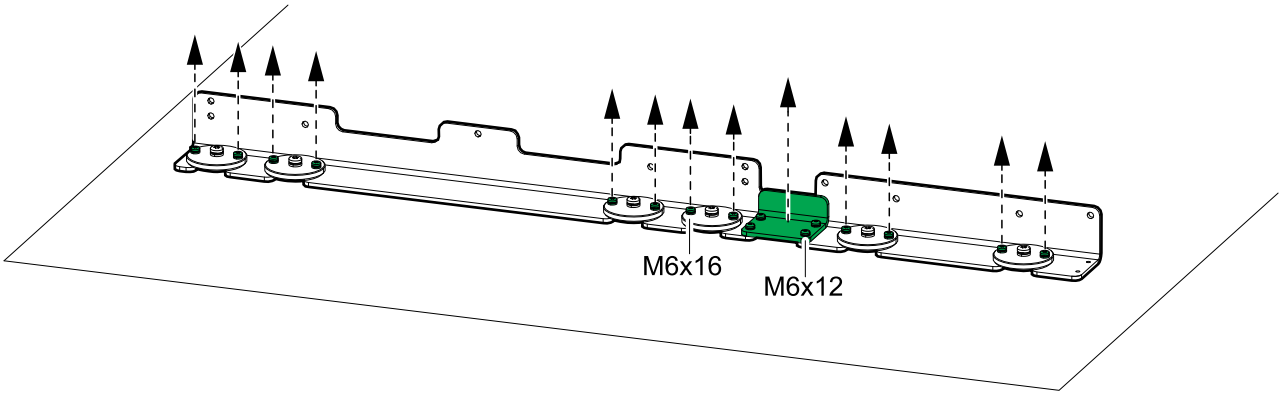
2. Mount the rear anchoring assembly to the floor. Use appropriate hardware for the floor type – the hole diameter in the rear anchors is ø16 mm. The minimum requirement is M12 strength grade 8.8 hardware.

Rear View



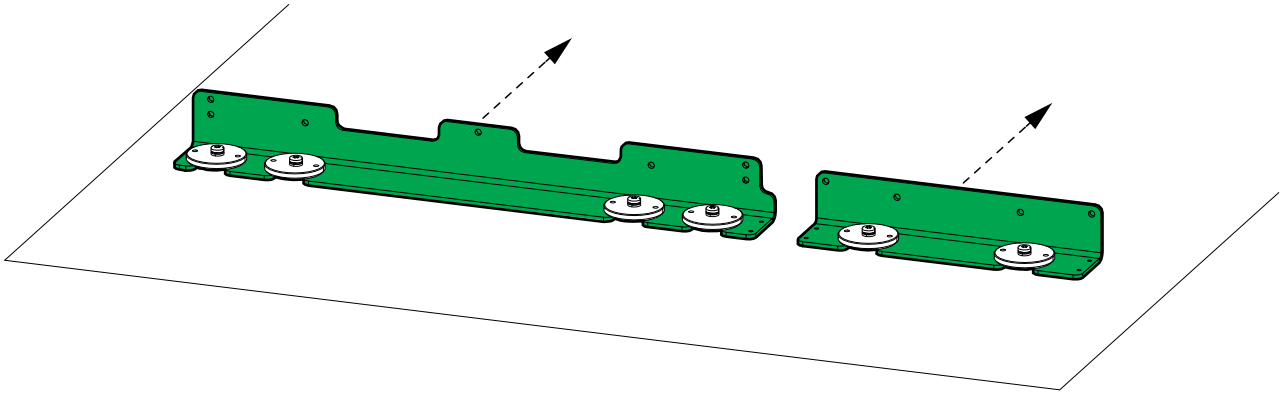
3. Remove all the screws and the interconnection plate.

Rear View



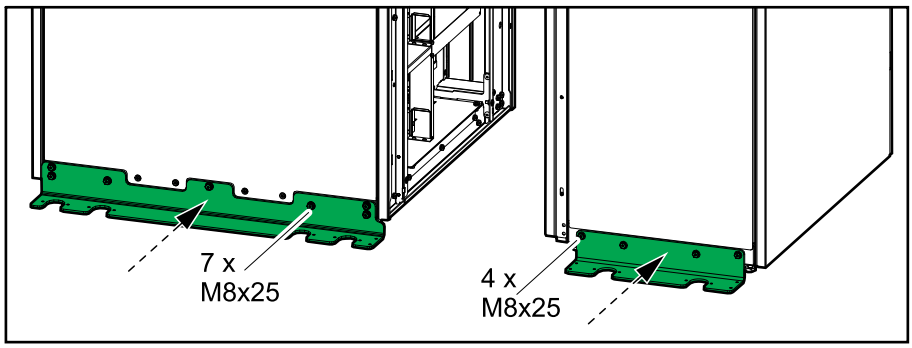
4. Remove the anchoring brackets.

Rear View



5. Install the rear anchoring brackets on the UPS and the bottom entry cabinet with the provided M8x25 bolts.

Rear View of the UPS and the Bottom Entry Cabinet



Install the Bottom Entry Cabinet with the Galaxy VL UPS

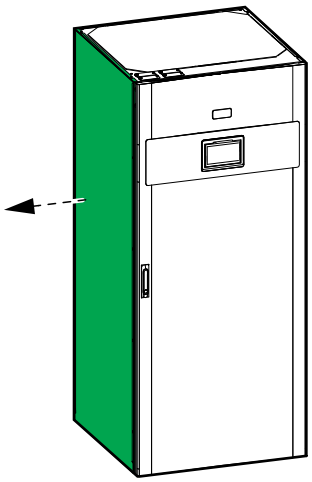
⚠⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not drill or punch holes with the gland plates installed and do not drill or punch holes in close proximity to the cabinet.

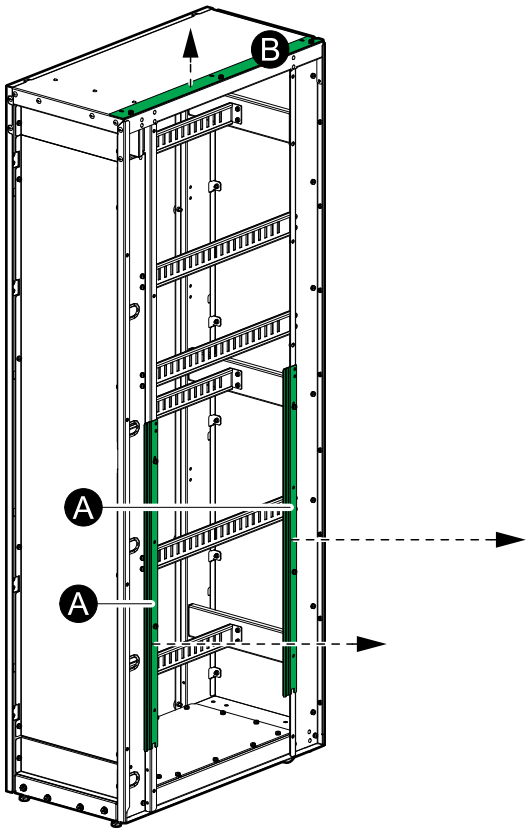
Failure to follow these instructions will result in death or serious injury.

1. Remove the left side panel from the UPS.

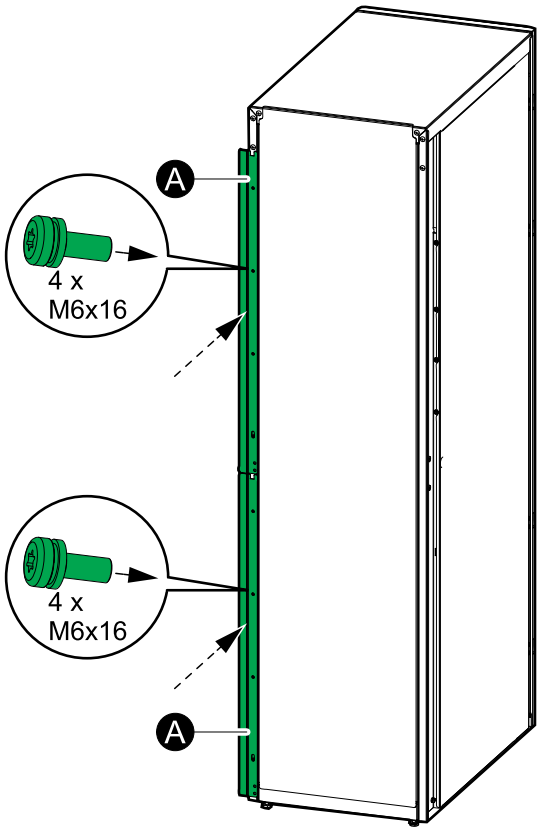


2. Remove the brackets (A) and (B) from the bottom entry cabinet. Install the brackets (A) on the rear of the bottom entry cabinet. Save the bracket (B) for top interconnection with the UPS.

Front View of the Bottom Entry Cabinet

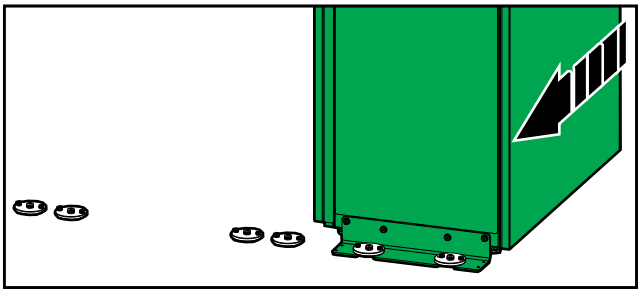


Rear View of the Bottom Entry Cabinet

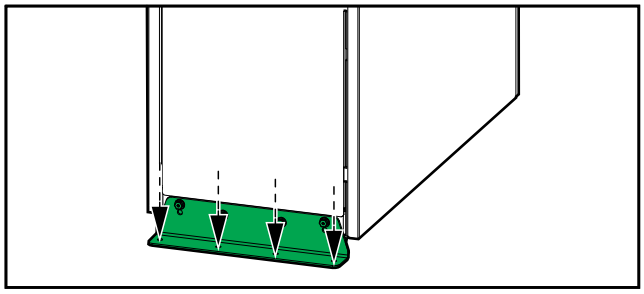


3. Push the bottom entry cabinet into final position. Align with seismic anchoring, if present. For systems without seismic anchoring, reinstall the rear transportation bracket on the rear of the bottom entry cabinet and mount it to the floor.

Rear View with Seismic Anchoring



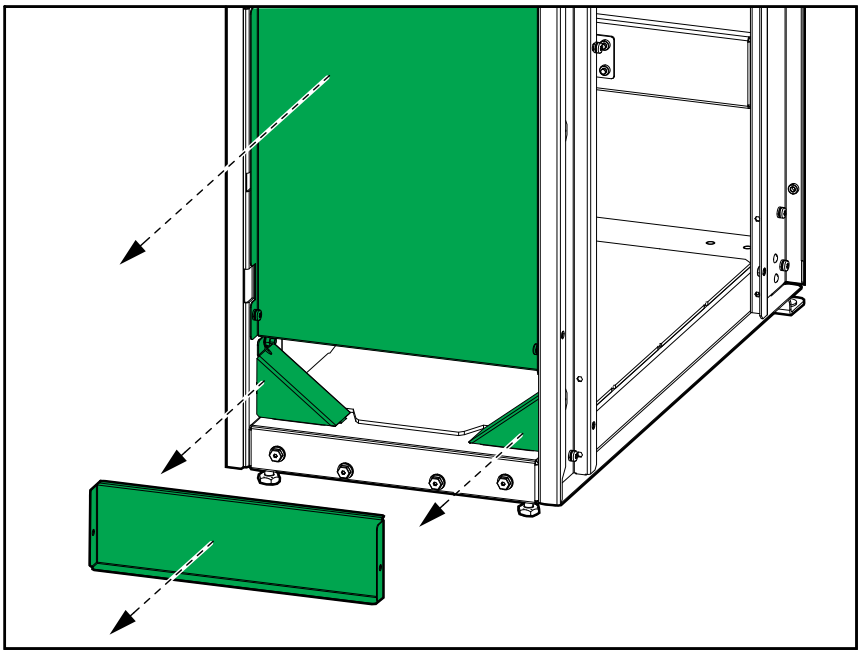
Rear View without Seismic Anchoring



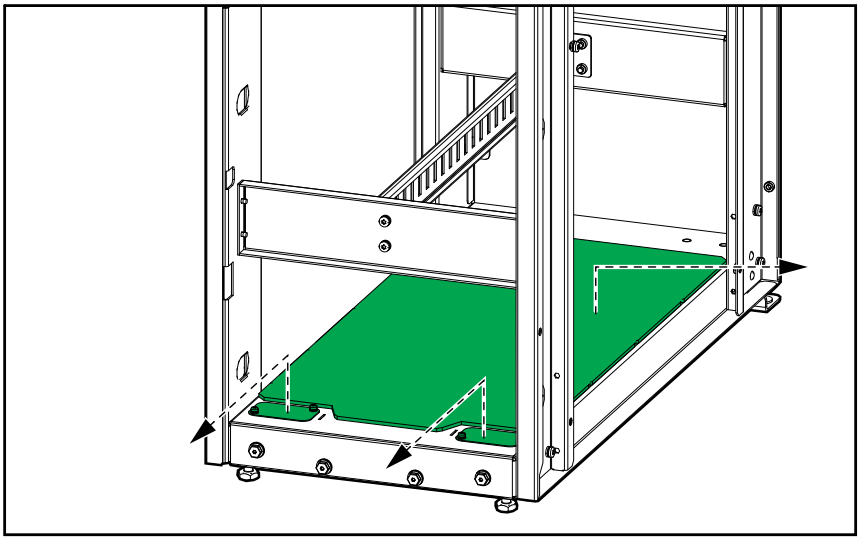
4. Lower the front and rear leveling feet on the bottom entry cabinet with a wrench until they connect with the floor. The casters must not have contact with the floor. Use a bubble-leveler to check that the bottom entry cabinet is level.

NOTICE
RISK OF EQUIPMENT DAMAGE Do not move the cabinet after the leveling feet have been lowered. **Failure to follow these instructions can result in equipment damage.**

5. Prepare for power and signal cables:
   a. Remove the middle front plate, the lower front plate, and the triangle covers from the bottom entry cabinet.



   b. Remove the gland plates for the signal cables and the gland plate for the power cables.

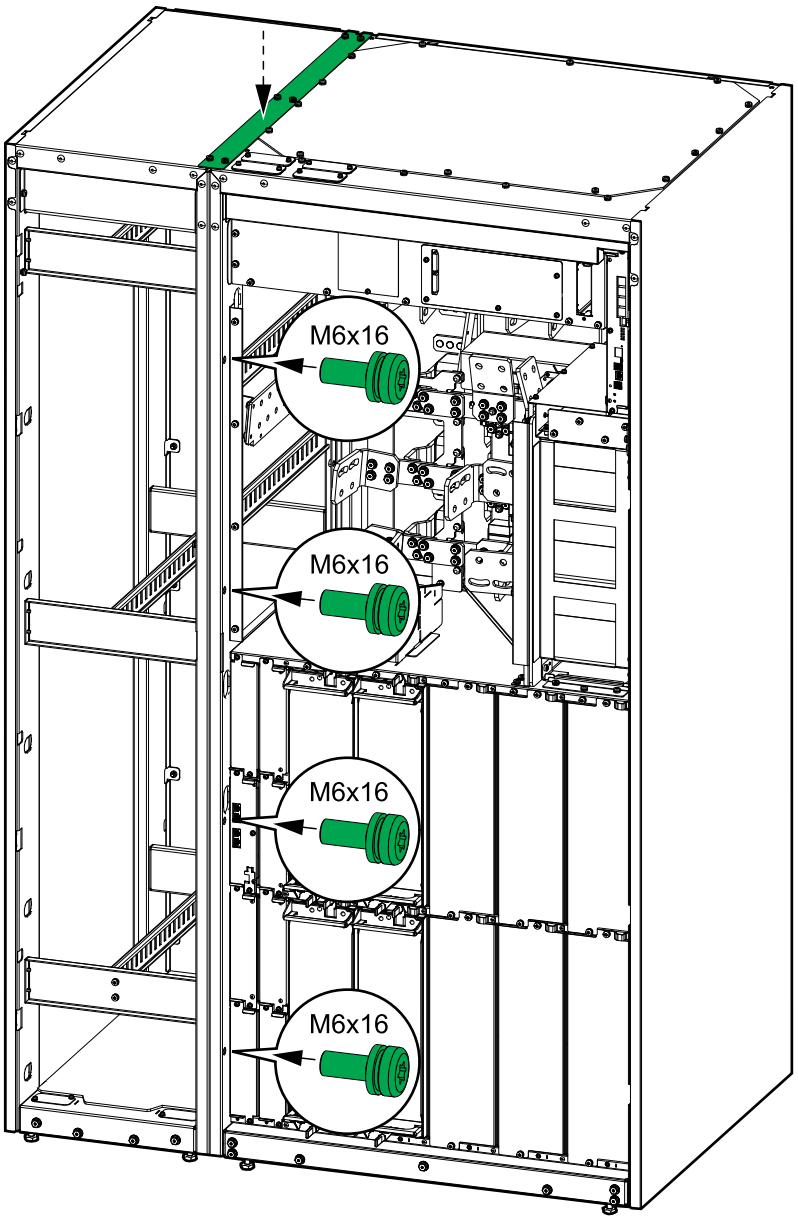


   c. Remove the two casters from the gland plate for power cables.
   d. Drill/punch holes for cables or conduits/grommets in the gland plates. Install conduits/grommets (not provided), if applicable.
   e. Reinstall the gland plates. Save the triangle covers, the lower front plate, and the middle front plate for final installation.
6. Push the UPS into position next to the bottom entry cabinet. Align with seismic anchoring, if present.

7. Lower the front and rear leveling feet on the UPS with a wrench until they connect with the floor. The casters must not have contact with the floor. Use a bubble-leveler to check that the UPS is level.

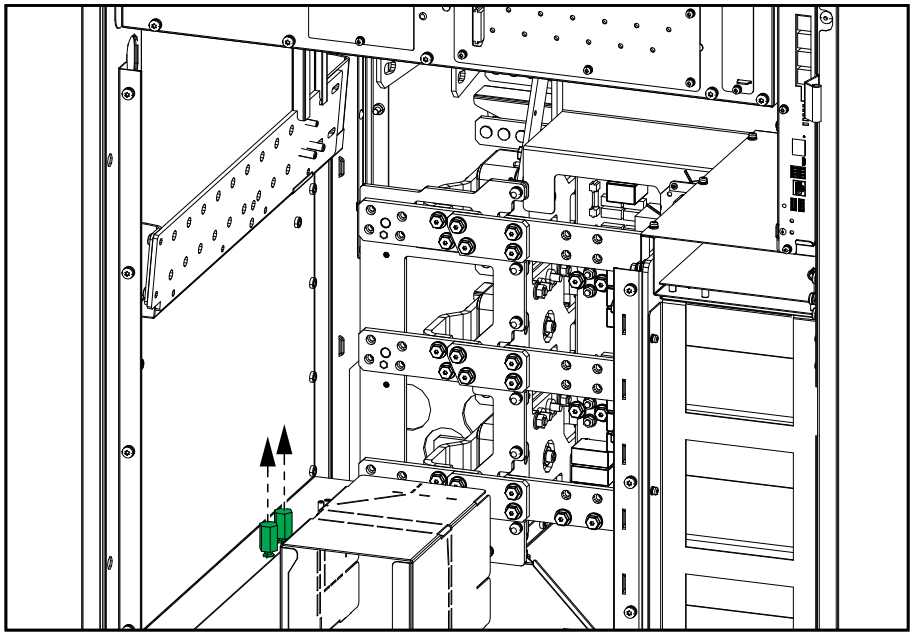
NOTICE
RISK OF EQUIPMENT DAMAGE Do not move the cabinet after the leveling feet have been lowered. **Failure to follow these instructions can result in equipment damage.**

8. Interconnect the bottom entry cabinet and the UPS in the front with screws as shown and install the top bracket. The top bracket was removed from the top of the bottom entry cabinet earlier.



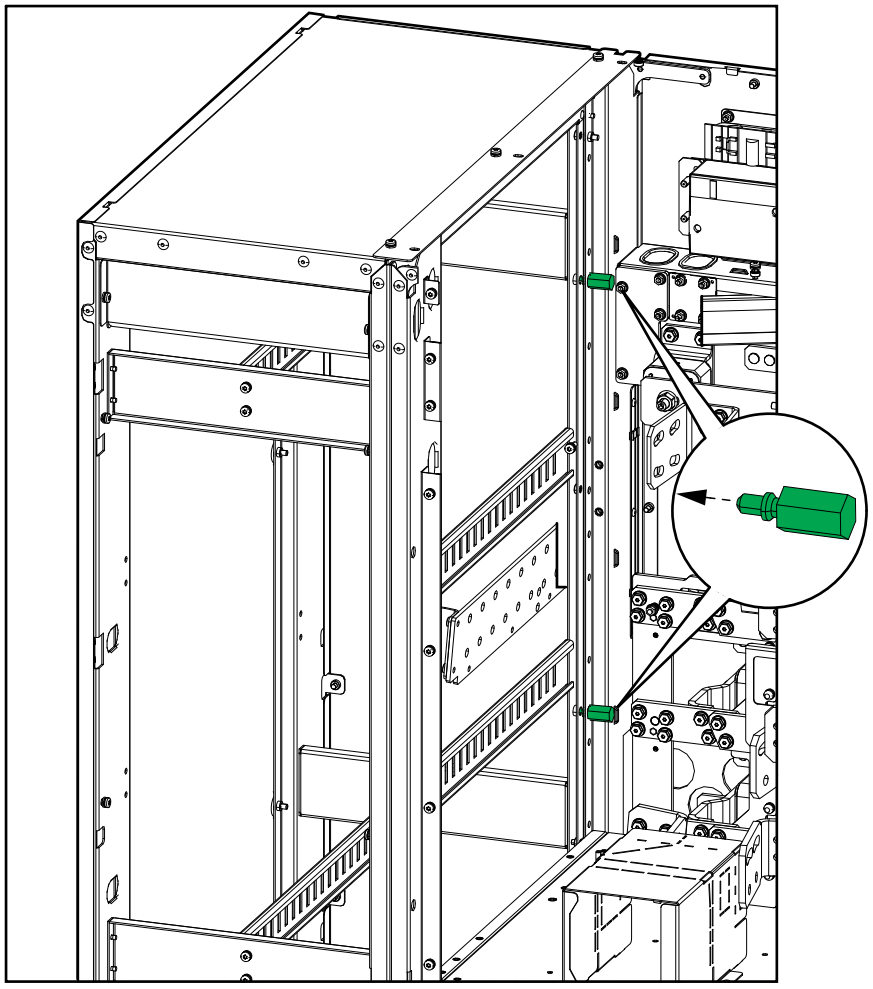
9. Remove the two special screws from the UPS.

Front View of the UPS

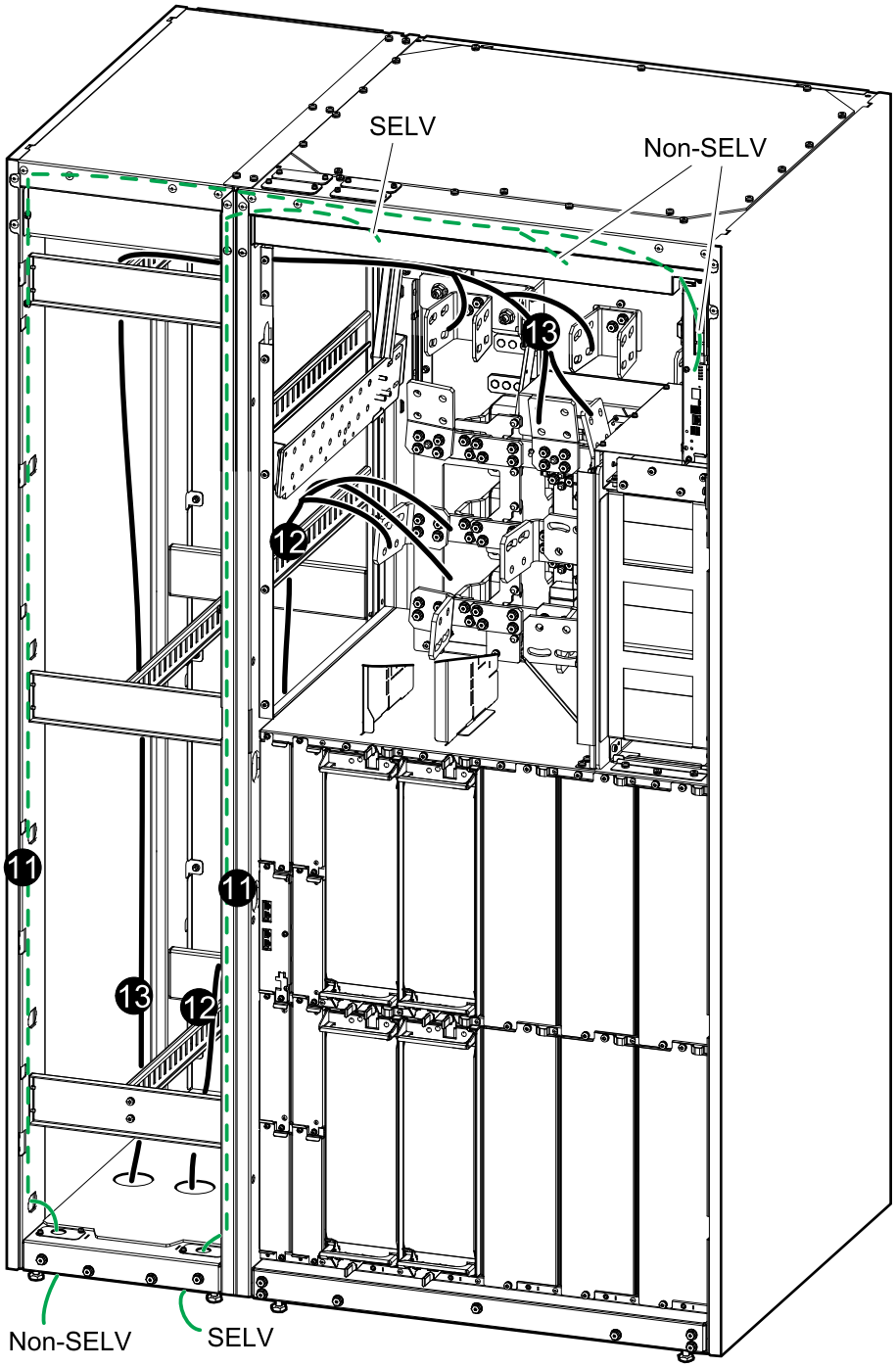


10. Install the two special screws for rear interconnection between the bottom entry cabinet and the UPS as shown.

Front View of the Bottom Entry Cabinet and the UPS

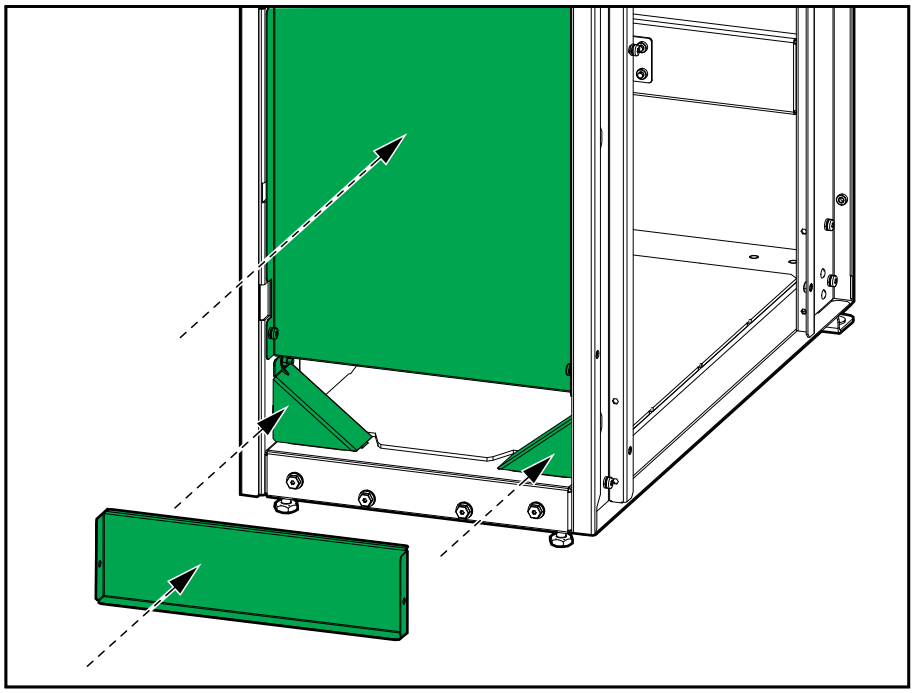


11. Route the signal cables through the bottom entry cabinet and into the UPS. Route as shown to separate the Class 2/SELV cables from the non-Class 2/ non-SELV cables. A divider inside the cable channel in the UPS separates the cables.



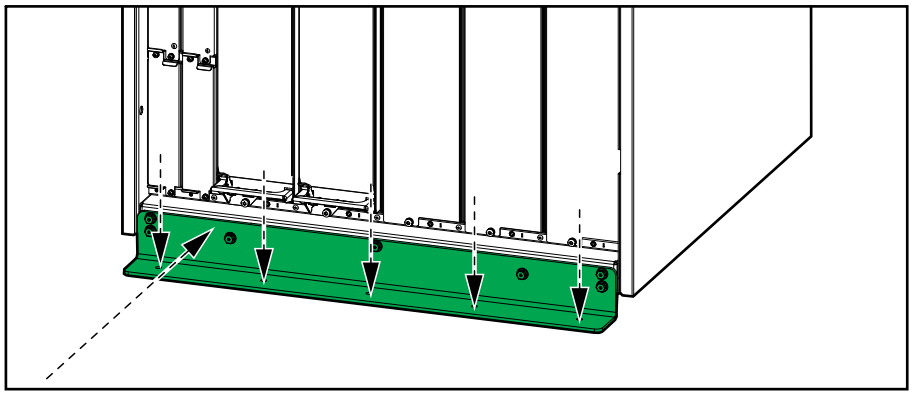
12. Route the input cables, the bypass cables, and the PE cables/equipment grounding conductor (EGC) up through the right half of the bottom entry cabinet and into the UPS as shown.
13. Route the battery cables, the neutral cables, and the output cables up through the left half of the bottom entry cabinet and into the UPS as shown.

14. Reinstall the triangle covers, the lower front plate, and the middle front plate on the bottom entry cabinet.



15. **For seismic anchoring**: Install the seismic front anchoring bracket on the UPS and the bottom entry cabinet and mount the seismic front brackets to the floor. Use appropriate hardware for the floor type – the hole diameter in the seismic front bracket is ø14 mm. The minimum requirement is M12 strength grade 8.8 hardware.

Front View of the UPS



16. Follow the UPS installation manual to connect the power cables.

Install the Bottom Entry Cabinet with the Easy UPS 3L

⚠⚠DANGER

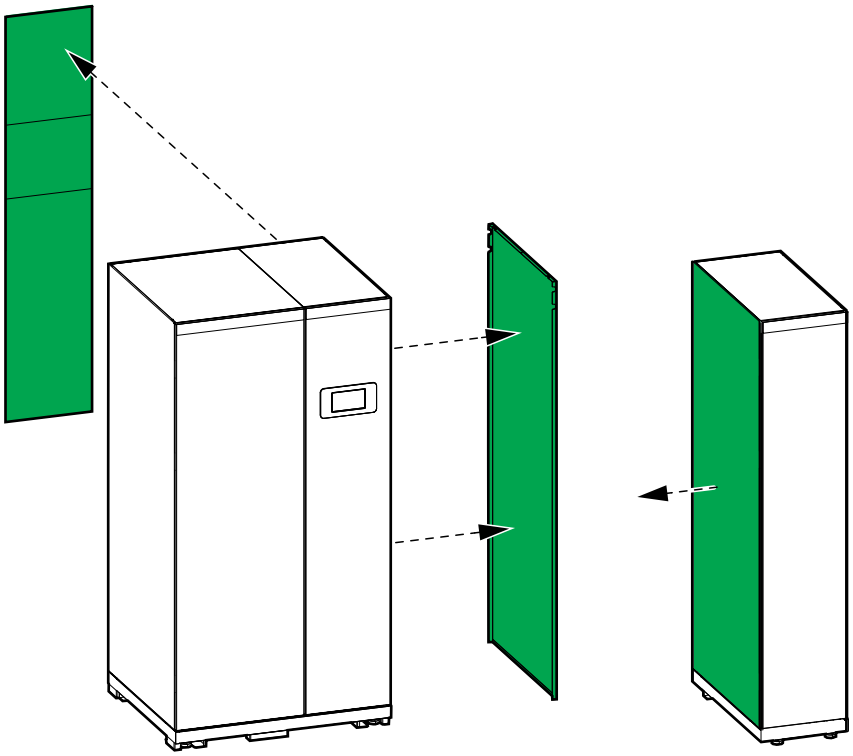
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not drill or punch holes with the gland plates installed and do not drill or punch holes in close proximity to the cabinet.

Failure to follow these instructions will result in death or serious injury.

1. Place the UPS in the final location with a forklift.
2. Remove the right side panel and the three rear plates from the UPS. Remove the left side panel from the bottom entry cabinet.

The UPS and the Bottom Entry Cabinet



3. Push the bottom entry cabinet into final position on the right side of the UPS.
4. Lower the front and rear leveling feet on the bottom entry cabinet with a wrench until they connect with the floor. The casters must not have contact with the floor. Use a bubble-leveler to check that the bottom entry cabinet is level.

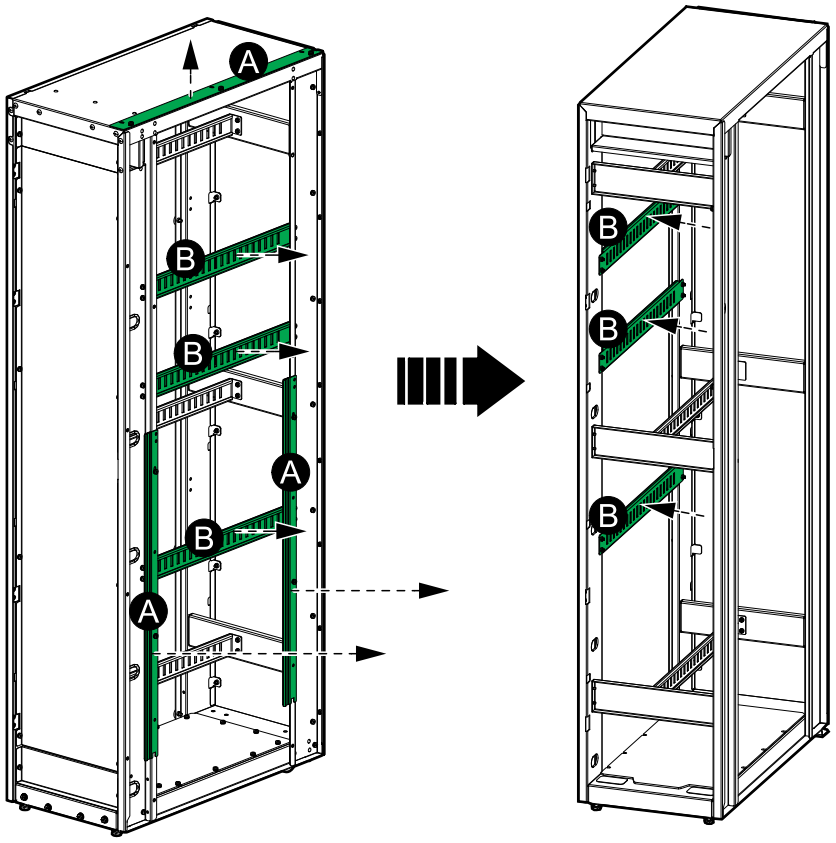
NOTICE

RISK OF EQUIPMENT DAMAGE

Do not move the cabinet after the leveling feet have been lowered.

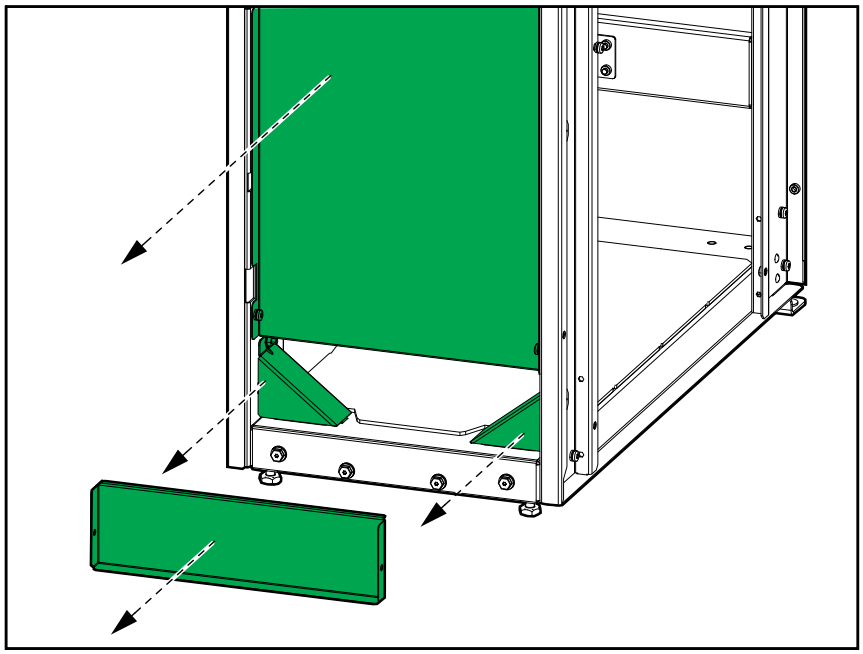
Failure to follow these instructions can result in equipment damage.

5. Remove the brackets (A) from the bottom entry cabinet and discard the brackets (A). Remove the cable reliefs (B) and reinstall the cable reliefs (B) in new position.

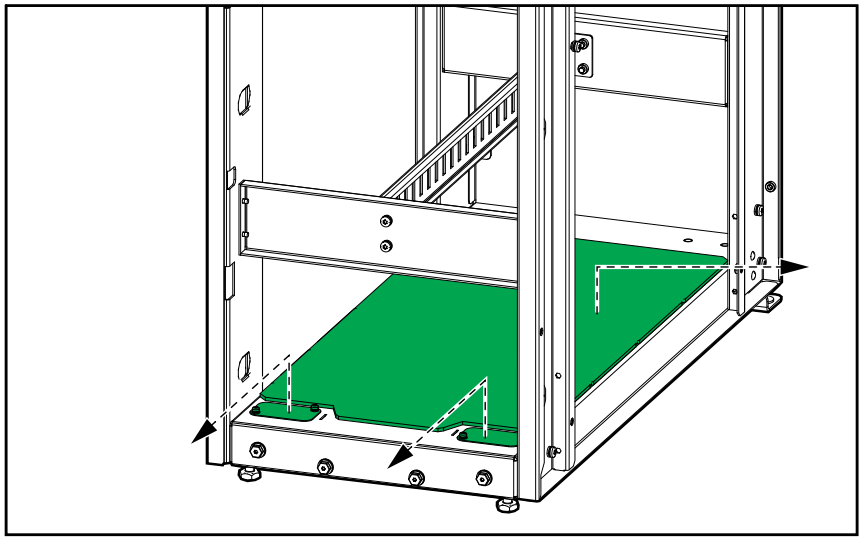


6. Prepare for power and signal cables:

   a. Remove the middle front plate, the lower front plate, and the triangle covers from the bottom entry cabinet.



   b. Remove the gland plates for the signal cables and the gland plate for the power cables.

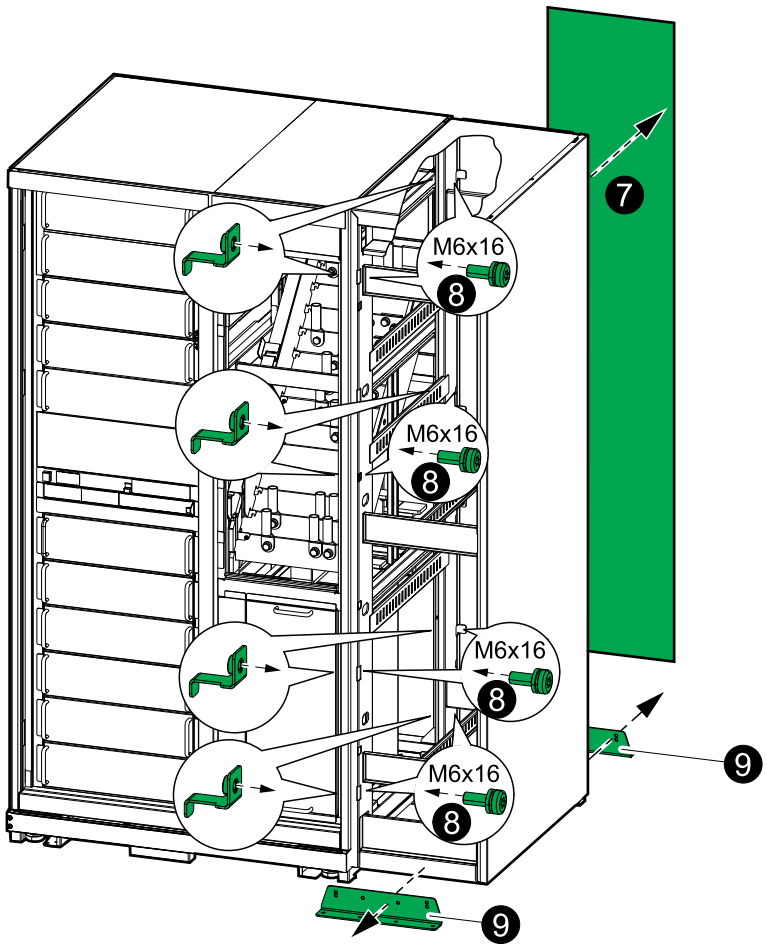


   c. Remove the two casters from the gland plate for the power cables.

   d. Drill/punch holes for cables or conduits/grommets in the gland plates. Install conduits/grommets (not provided), if applicable.

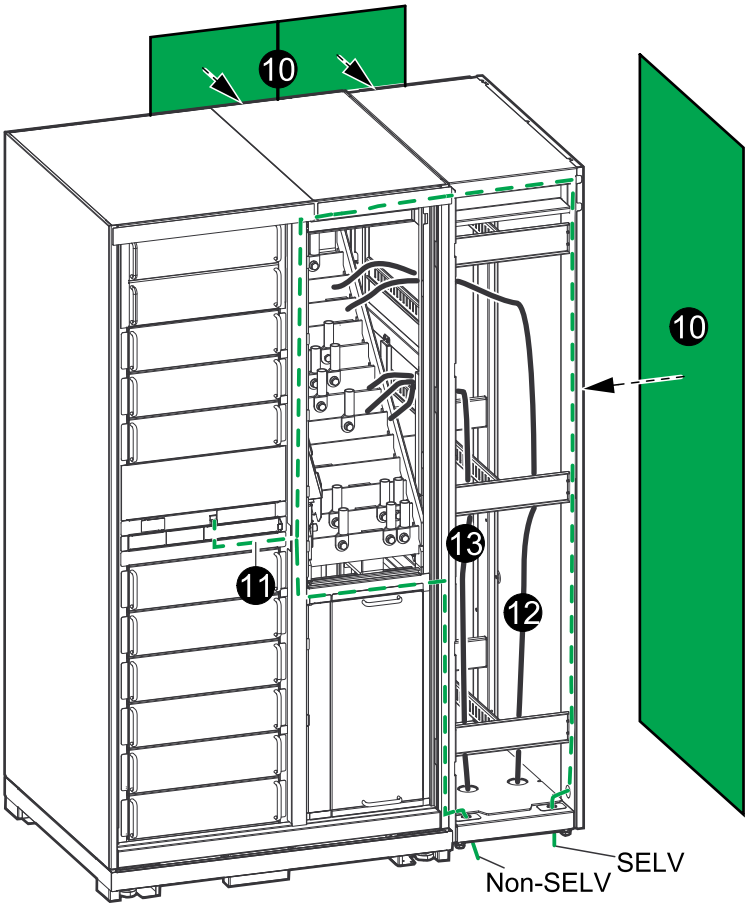
   e. Reinstall the gland plates. Save the triangle covers, the lower front plate, and the middle front plate for final installation.

7. Remove the rear plate from the bottom entry cabinet.



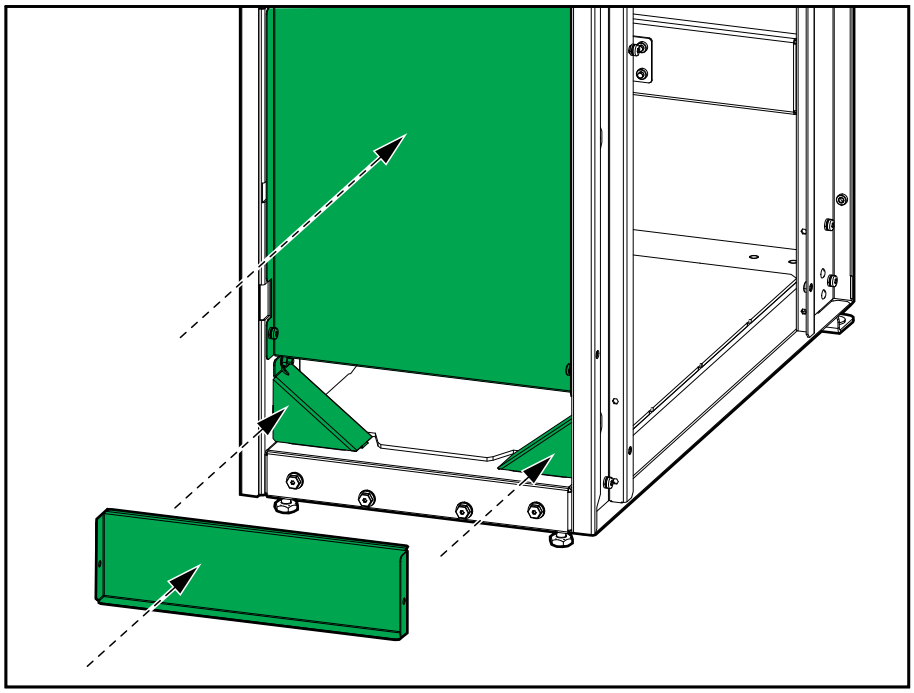
8. Interconnect the bottom entry cabinet and the UPS in the front and rear with screws and the provided special nuts as shown.
9. Remove the front and rear transportation brackets from the bottom entry cabinet after the interconnection is complete.

10. Reinstall the rear plates on the UPS and on the bottom entry cabinet. Install the side panel on the right side of the bottom entry cabinet. The side panel was removed from the left side of the bottom entry cabinet in step 2.



11. Route the signal cables through the bottom entry cabinet and into the UPS. Route as shown to separate the Class 2/SELV cables from the non-Class 2/ non-SELV cables.
12. Route the input cables, the battery cables, the neutral cables, and the PE cables up through the right half of the bottom entry cabinet and into the UPS as shown. Use soft copper power cables.
13. Route the bypass cables and the output cables up through the left half of the bottom entry cabinet and into the UPS as shown. Use soft copper power cables.

14. Reinstall the triangle covers, the lower front plate, and the middle front plate on the bottom entry cabinet.



15. Follow the UPS installation manual to connect the power cables.

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As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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