

Galaxy VS

Modular Battery Cabinet

Installation

Up to 9 Battery Strings
GVSMODBC9

1/2021



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or scan the QR code above for digital experience and translated manuals.

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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.

FCC Statement

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.

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

Electromagnetic Compatibility

NOTICE

RISK OF ELECTROMAGNETIC DISTURBANCE

This is a product category C2 UPS product. In a residential environment, this product may cause radio inference, in which case the user may be required to take additional measures.

Failure to follow these instructions can result in equipment damage.

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

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.
- 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 utility/mains supply. Before installing or servicing the UPS system, ensure that the units are OFF and that utility/mains and batteries are disconnected. Wait five minutes before opening the UPS to allow the capacitors to discharge.
- A disconnection device (e.g. disconnection circuit breaker or switch) must be installed to enable isolation of the system from upstream power sources in accordance with local regulations. This disconnection device must be easily accessible and visible.
- 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.

Battery Safety

⚡⚡ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Battery circuit breakers must be installed according to the specifications and requirements as defined by Schneider Electric.
- Servicing of batteries must only be performed or supervised by qualified personnel knowledgeable of batteries and the required precautions. Keep unqualified personnel away from batteries.
- Disconnect charging source prior to connecting or disconnecting battery terminals.
- Do not dispose of batteries in a fire as they can explode.
- Do not open, alter, or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

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

⚡⚡ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Batteries can present a risk of electric shock and high short-circuit current. The following precautions must be observed when working on batteries

- Remove watches, rings, or other metal objects.
- Use tools with insulated handles.
- Wear protective glasses, gloves and boots.
- Do not lay tools or metal parts on top of batteries.
- Disconnect the charging source prior to connecting or disconnecting battery terminals.
- Determine if the battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electric shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance (applicable to equipment and remote battery supplies not having a grounded supply circuit).

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

⚡⚡ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

When replacing batteries, always replace with the same type and number of batteries or battery packs.

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

NOTICE

RISK OF EQUIPMENT DAMAGE

- Wait until the system is ready to be powered up before installing batteries in the system. The time duration from battery installation until the UPS system is powered up must not exceed 72 hours or 3 days.
- Batteries must not be stored more than six months due to the requirement of recharging. If the UPS system remains de-energized for a long period, Schneider Electric recommends that you energize the UPS system for a period of 24 hours at least once every month. This charges the batteries, thus avoiding irreversible damage.

Failure to follow these instructions can result in equipment damage.

Modular Battery Cabinet Specifications

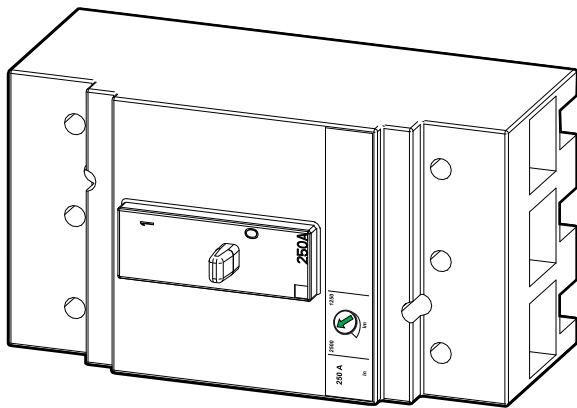
NOTICE

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 four modular battery cabinets can be connected to a UPS.

Number of battery blocks	40
Maximum number of battery strings	9
Nominal battery voltage (VDC)	480
Nominal float voltage (VDC)	545
Maximum boost voltage (VDC)	572
Temperature compensation	Enabled
End of discharge voltage (full load) (VDC)	384
Maximum battery current (A)	271
Maximum short circuit rating	10 kA

Trip Settings for Battery Breaker



Breaker type	JDF36250
I _r setting	250 (fixed)
I _m setting	1250

Recommended Cable Sizes for 380/400/415 V

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All wiring must comply with all applicable national and/or electrical codes.

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

NOTE: Overcurrent protection is to be provided by others.

Cable sizes in this manual are based on table B.52.3 and table B.52.5 of IEC 60364-5-52 with the following assertions:

- 90 °C conductors
- An ambient temperature of 30 °C
- Use of copper conductors
- Installation method C

PE cable size is based on table 54.2 of IEC 60364-4-54.

If the ambient temperature is greater than 30 °C, larger conductors are to be selected in accordance with the correction factors of the IEC.

DC+/DC- (mm ²)	70
DC PE (mm ²)	35

Recommended Cable Sizes for 200/208/220/480 V

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All wiring must comply with all applicable national and/or electrical codes.

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

Cable sizes in this manual are based on Table 310.15 (B)(16) of the National Electrical Code (NEC) with the following assertions:

- 90 °C (194 °F) THHN conductors (75 °C (167 °F) termination)
- An ambient temperature of 30 °C (86 °F)
- Use of copper conductors

Equipment grounding conductors (PE in this manual) are sized in accordance with NEC Article 250.122 and Table 250.122.

If the ambient temperature is greater than 30 °C (86 °F), larger conductors are to be selected in accordance with the correction factors of the NEC.

DC+/DC- (AWG/kcmil)	3/0
DC PE (AWG/kcmil)	4

Recommended Bolt and Lug Sizes

NOTICE

RISK OF EQUIPMENT DAMAGE

Use only UL approved compression cable lugs.

Failure to follow these instructions can result in equipment damage.

Copper – One Hole Cable Lugs

Cable size	Bolt size	Cable lug type	Crimping tool	Die
4 AWG	M8 x 25 mm	LCA4-56-L	CT-720	CD-720-1 Gray P29
3/0 AWG	M8 x 25 mm	LCA3/0-56-X	CT-720	CD-720-2 Orange P50

Copper – Two Hole Cable Lugs

Cable size	Bolt size	Cable lug type	Crimping tool	Die
4 AWG	M8 x 25 mm	LCC4-12-L	CT-930	CD-920-4 Gray P29
3/0 AWG	M8 x 25 mm	LCC3/0-12-X	CT-930	CD-920-3/0 Orange P50

Torque Specifications

Bolt size	Torque
M4	1.7 Nm (1.25 lb-ft / 15 lb-in)
M5	2.2 Nm (1.62 lb-ft / 19.5 lb-in)
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)

Modular Battery Cabinet Weights and Dimensions

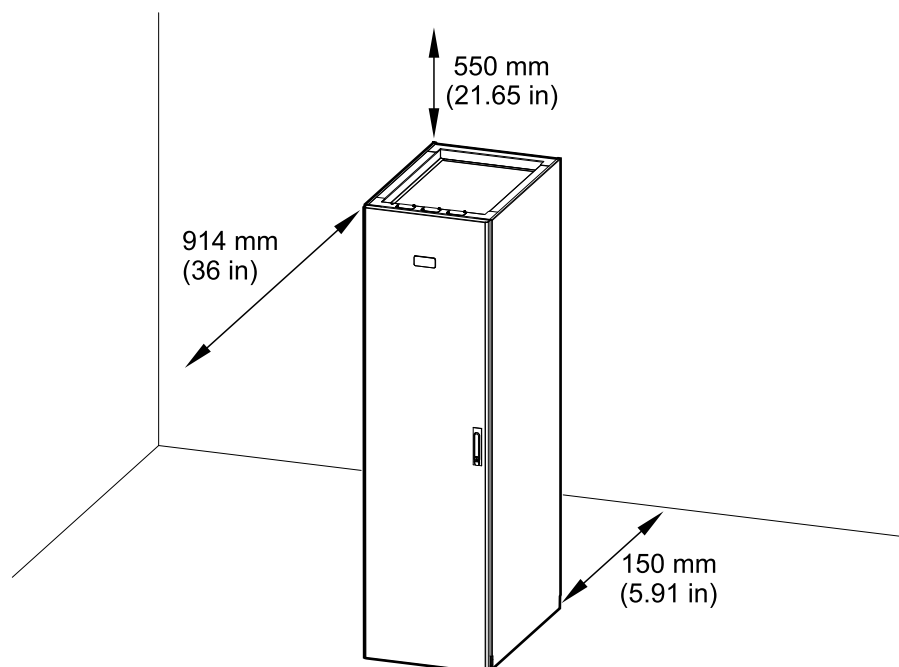
Commercial reference	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
GVSMODBC9 – Empty – With nine battery strings	186 (410) 1338 (2950)	1970 (77.56)	550 (21.65)	847 (33.35)

NOTE: One battery module weighs approximately 32 kg (70.5 lbs).

Clearance

NOTE: Clearance dimensions are published for airflow and service access only. Consult with the local safety codes and standards for additional requirements in your local area.

NOTE: The required minimum rear clearance is 150 mm (5.91 in).



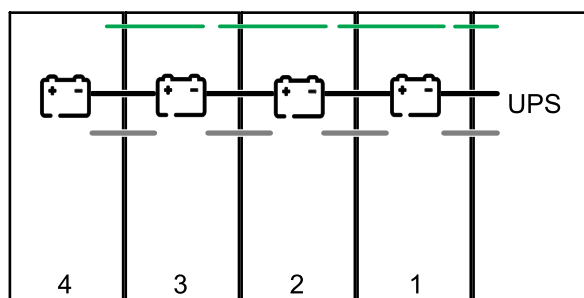
Environment

	Operating	Storage
Temperature	0 °C to 40 °C (32 °F to 104 °F)	-15 °C to 40 °C (5 °F to 104 °F)
Relative humidity	0-95% non-condensing	10-80% non-condensing
Elevation	0-3000 m (0-10000 feet)	
Protection class	IP20	
Color	RAL 9003, gloss level 85%	

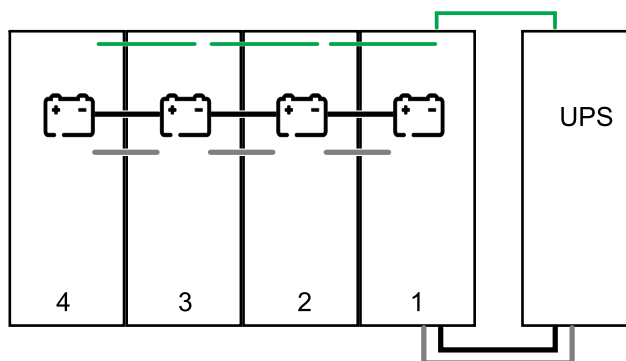
Installation Procedure for UPS with Internal Batteries

NOTE: The modular battery cabinet can be installed adjacent or remote to a UPS with internal batteries.

Modular Battery Cabinets and Adjacent UPS Rated for Maximum 100 kW



Modular Battery Cabinets and Remote UPS Rated for Maximum 100 kW



— Signal cable
— Power cable
— PE cable

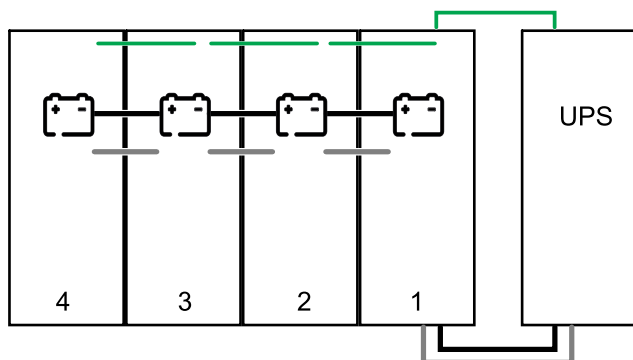
NOTE: The distance between the modular battery cabinet(s) and the UPS must not exceed 100 m. Contact Schneider Electric for installations with a longer distance.

1. Prepare for Installation, page 18.
2. **For installation with remote UPS:**
 - a. Install the Conduit Box on the Modular Battery Cabinet, page 19.
 - b. Prepare Modular Battery Cabinet 1 for Signal Cables, page 20.
3. Install the Seismic Anchoring (Option), page 21.
4. **For installation with adjacent UPS:** Interconnect Modular Battery Cabinet 1 and the Adjacent UPS, page 24.
5. Interconnect the Modular Battery Cabinets, page 26.
6. Connect the Power Cables for a UPS Rated for Maximum 100 kW, page 28.
7. Connect the Signal Cables, page 33.
8. Add Translated Safety Labels to Your Product, page 37.
9. Final Installation, page 38.

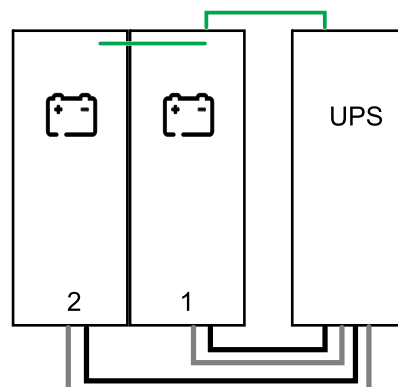
Installation Procedure for UPS for External Batteries

NOTE: The modular battery cabinet can only be installed remote to a UPS for external batteries.

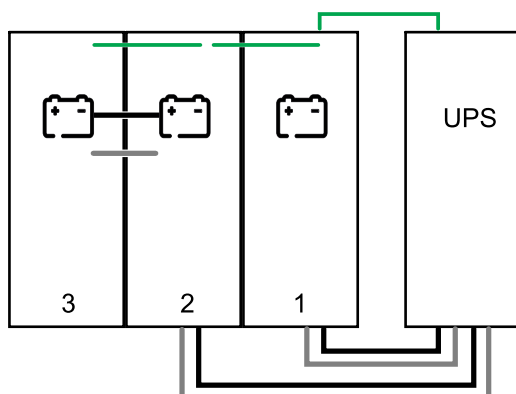
Modular Battery Cabinets and Remote UPS Rated for Maximum 100 kW



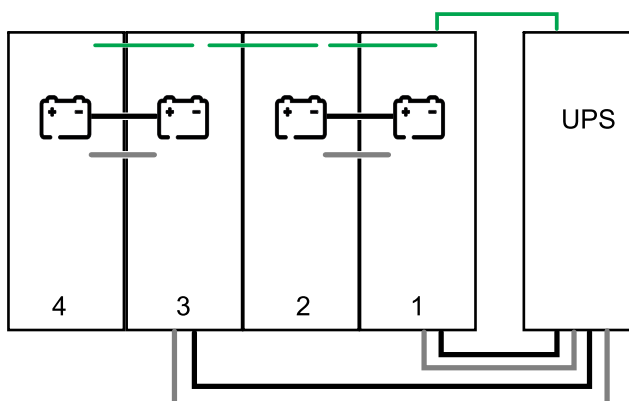
Two Modular Battery Cabinets and Remote UPS Rated over 100 kW



Three Modular Battery Cabinets and Remote UPS Rated over 100 kW



Four Modular Battery Cabinets and Remote UPS Rated over 100 kW



— Signal cable
— Power cable
— PE cable

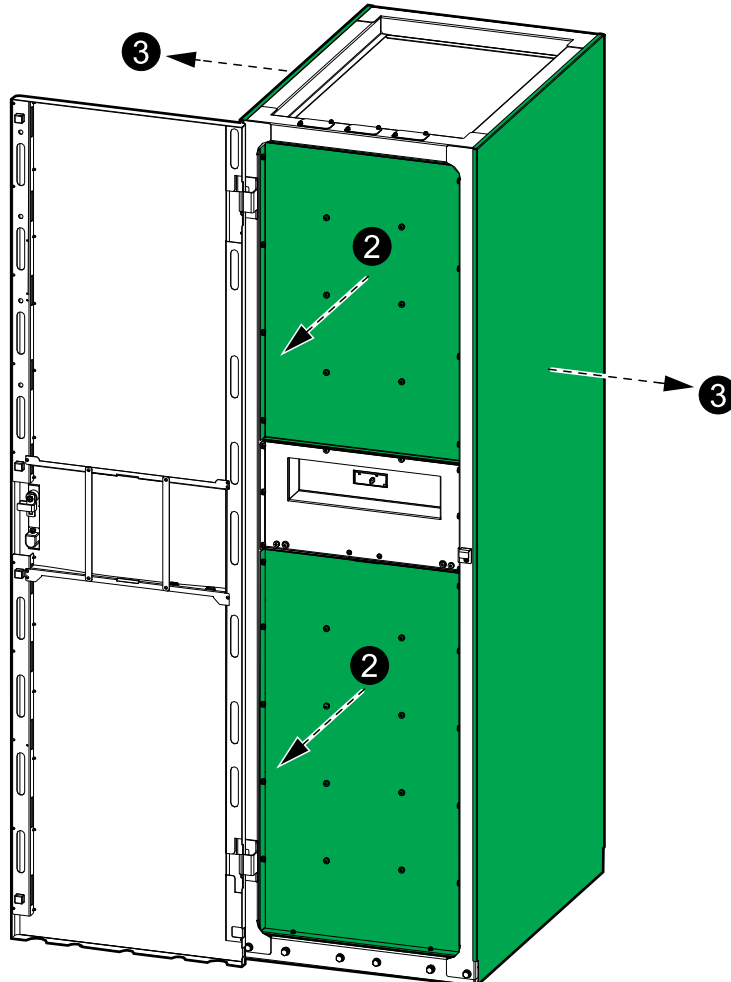
NOTE: The distance between the modular battery cabinet(s) and the UPS must not exceed 100 m. Contact Schneider Electric for installations with a longer distance.

1. Prepare for Installation, page 18.
2. Install the Conduit Box on the Modular Battery Cabinet, page 19.
3. Prepare Modular Battery Cabinet 1 for Signal Cables, page 20.
4. Install the Seismic Anchoring (Option), page 21.
5. Interconnect the Modular Battery Cabinets, page 26.
6. Perform one of the following:
 - **UPS rated for maximum 100 kW:** Connect the Power Cables for a UPS Rated for Maximum 100 kW, page 28, OR
 - **UPS rated over 100 kW:** Connect the Power Cables for a UPS Rated over 100 kW, page 30.

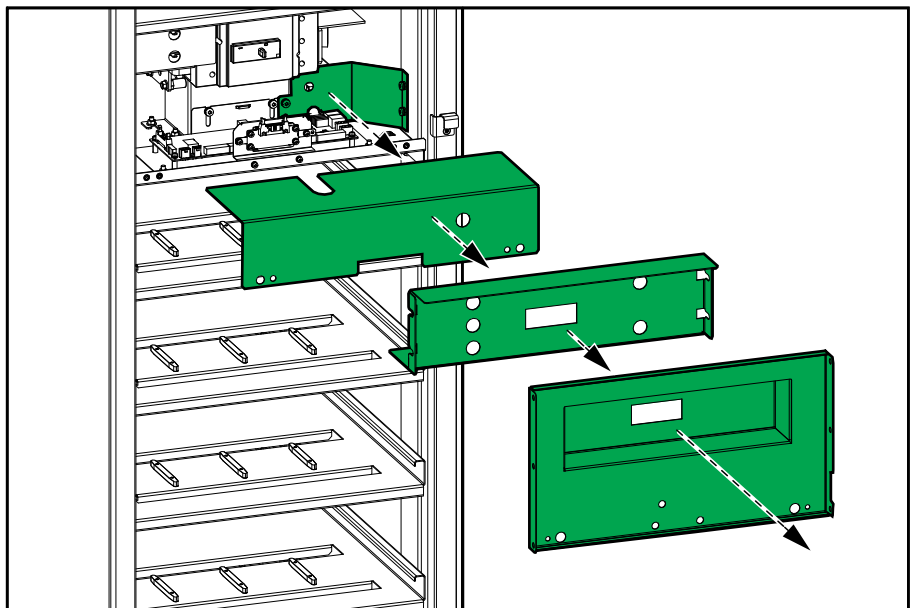
7. Connect the Signal Cables, page 33.
8. Add Translated Safety Labels to Your Product, page 37.
9. Final Installation, page 38.

Prepare for Installation

1. Set the battery breaker BB to the open (OFF) position.
2. Remove the battery covers.
3. Remove side panels that will be adjacent to another modular battery cabinet or an adjacent UPS.



4. Remove the indicated covers.



Install the Conduit Box on the Modular Battery Cabinet

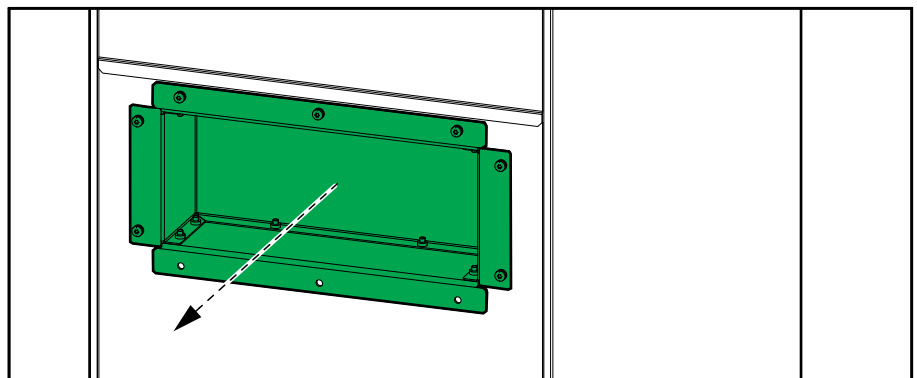
Only for installation with remote UPS.

UPS rated for maximum 100 kW: Perform the steps below on modular battery cabinet 1.

UPS rated over 100 kW: Perform the steps below on all the modular battery cabinets with external power cabling.

1. Remove the conduit box from the rear of the modular battery cabinet.

Rear View of the Modular Battery Cabinet



2. Remove the top or bottom gland plate from the conduit box.
3. Drill/punch holes for power cables/conduits in the top or bottom gland plate. Install conduits (not provided), if applicable.

⚠️ DANGER

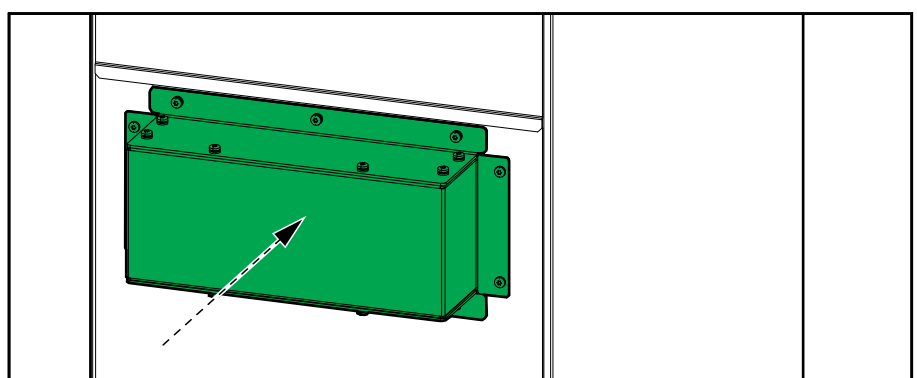
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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.

4. Reinstall the top or bottom gland plate on the conduit box.
5. Install the conduit box on the modular battery cabinet. Note that the conduit box is installed in the reverse position.

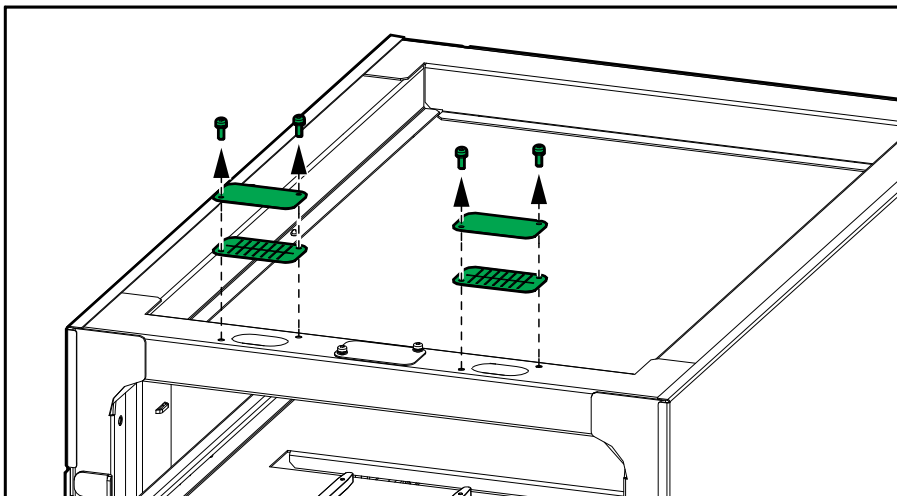
Rear View of the Modular Battery Cabinet



Prepare Modular Battery Cabinet 1 for Signal Cables

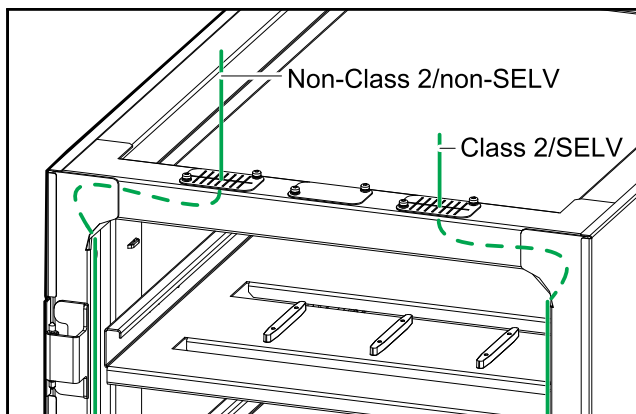
Only for installation with remote UPS.

1. Remove the gland plates and the brush plates from the front of modular battery cabinet 1.

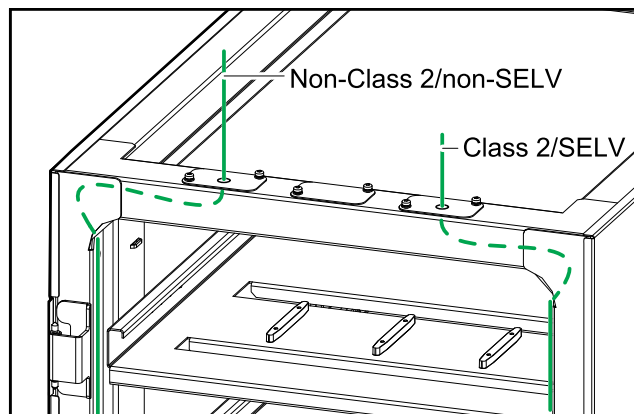


2. Perform one of the following:
 - **For installation without conduits:** Reinstall the brush plates.
 - **For installation with conduits:** Drill a hole in the gland plates for conduits, install conduits, and reinstall the gland plates.

Modular Battery Cabinet 1 without Conduits



Modular Battery Cabinet 1 with Conduits



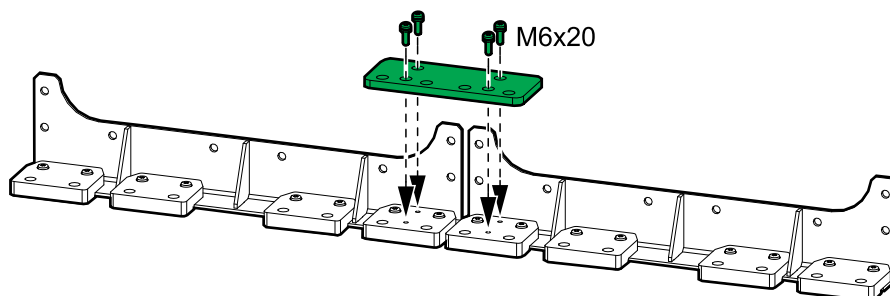
3. Route the Class 2/SELV signal cable through the right gland/brush plate and into modular battery cabinet 1.
4. Route the non-Class 2/non-SELV signal cable through the left gland/brush plate and into modular battery cabinet 1.

Install the Seismic Anchoring (Option)

Use the optional seismic kit GVSOPT016.

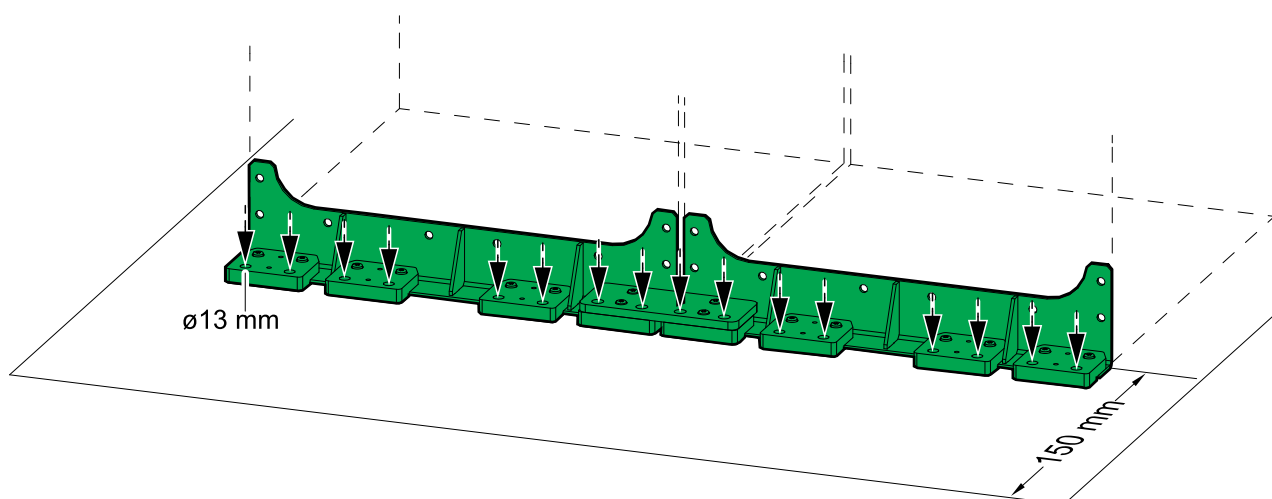
1. **For installations with adjacent cabinets:** Connect the rear anchoring assemblies with the interconnection plate. Repeat the step for all anchoring assemblies for adjacent cabinets.

Rear View of Installation with Adjacent Cabinets



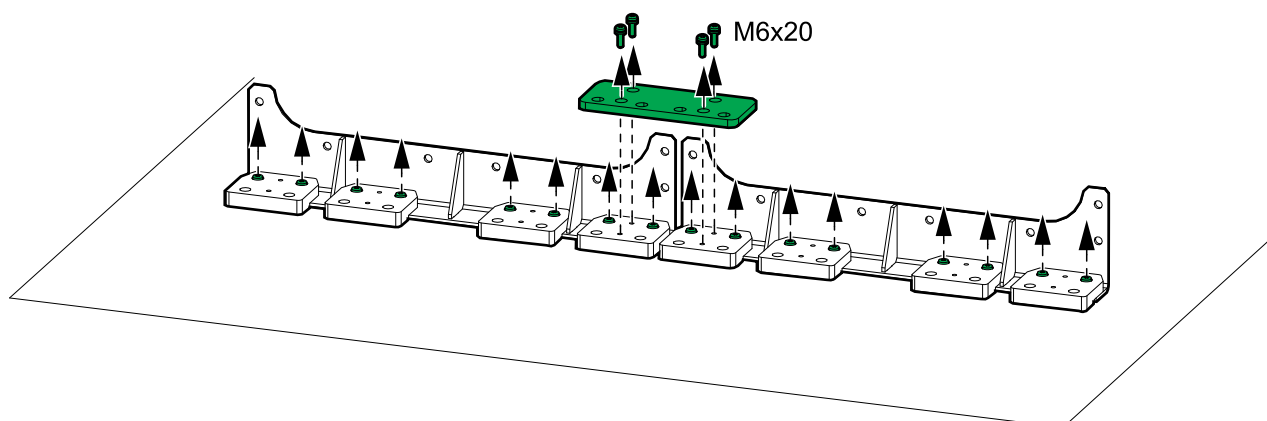
2. Mount the rear anchoring assembly to the floor. Use appropriate hardware for the floor type – the hole diameter in the rear anchors is $\varnothing 13$ mm. Minimum requirement is M12 grade 8.8 hardware.

Rear View of Installation with Adjacent Cabinets



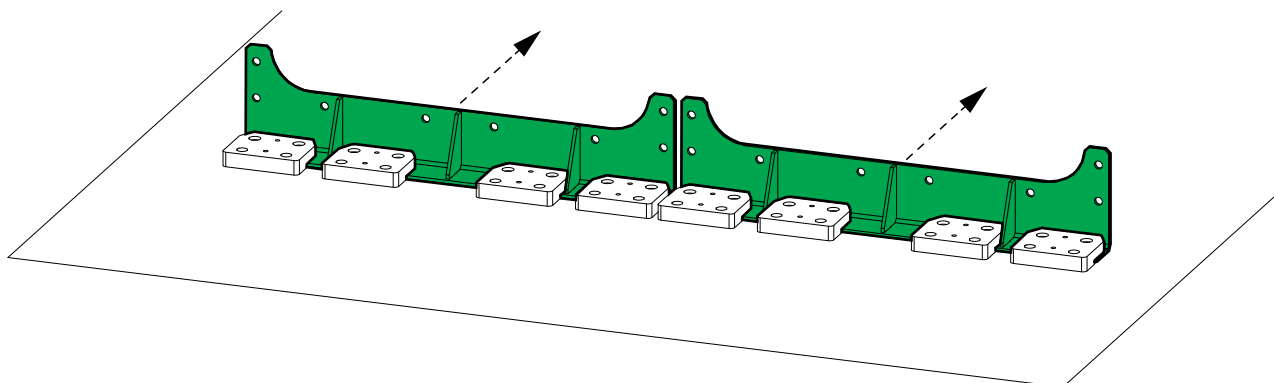
3. Remove all the screws and the interconnection plate.

Rear View of Installation with Adjacent Cabinets



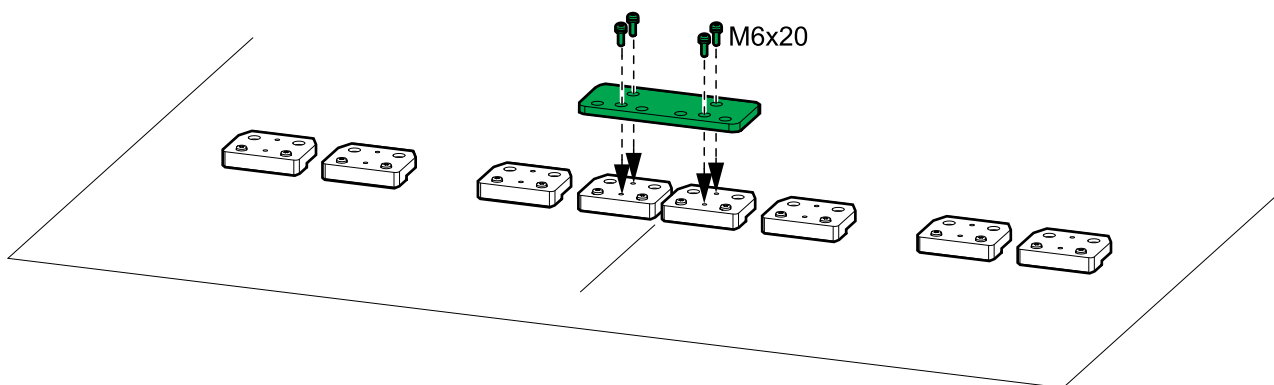
4. Remove the anchoring brackets.

Rear View of Installation with Adjacent Cabinets



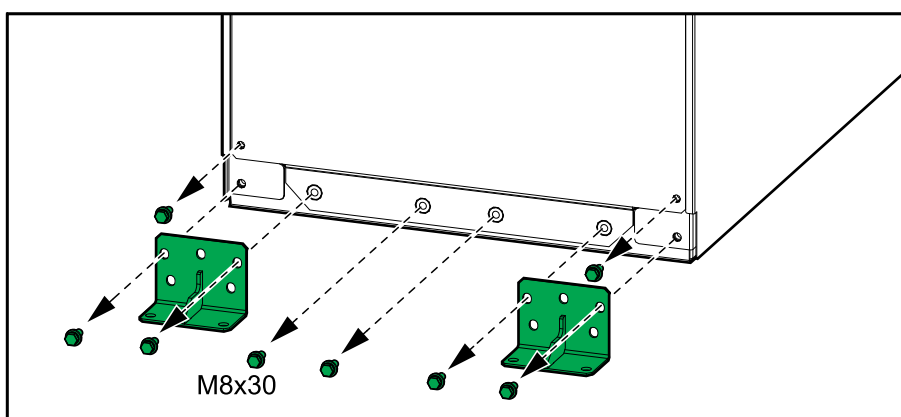
5. **For installations with adjacent cabinets:** Reinstall the interconnection plate.

Rear View of Installation with Adjacent Cabinets



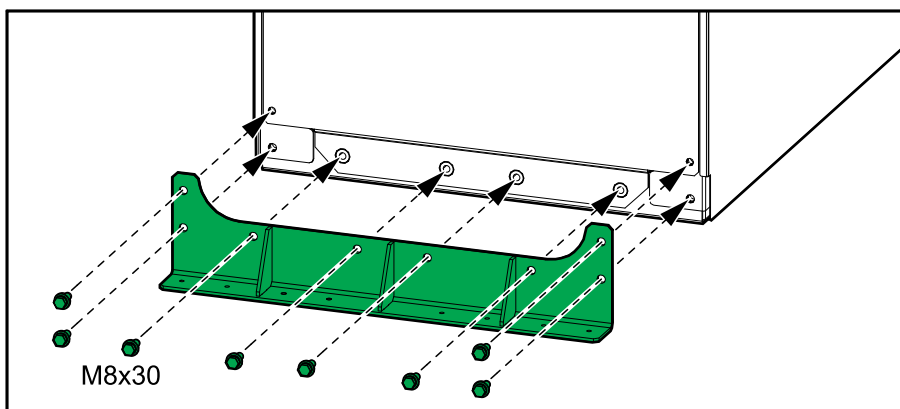
6. Remove the two transport brackets and the indicated bolts from the rear of the modular battery cabinet.

Rear View of the Modular Battery Cabinet



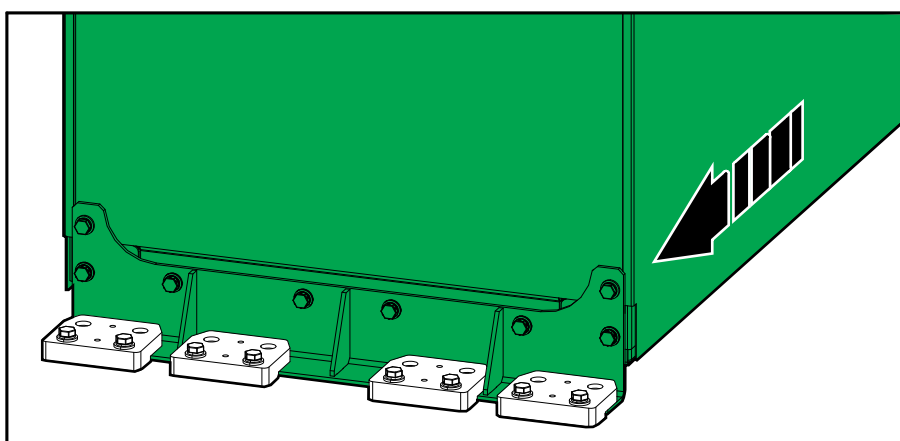
7. Install the rear anchoring bracket on the modular battery cabinet with the provided M8 bolts.

Rear View of the Modular Battery Cabinet



8. Push the modular battery cabinet into position so the rear anchoring bracket connects to the rear anchors. The front anchoring bracket is installed in the final installation steps.

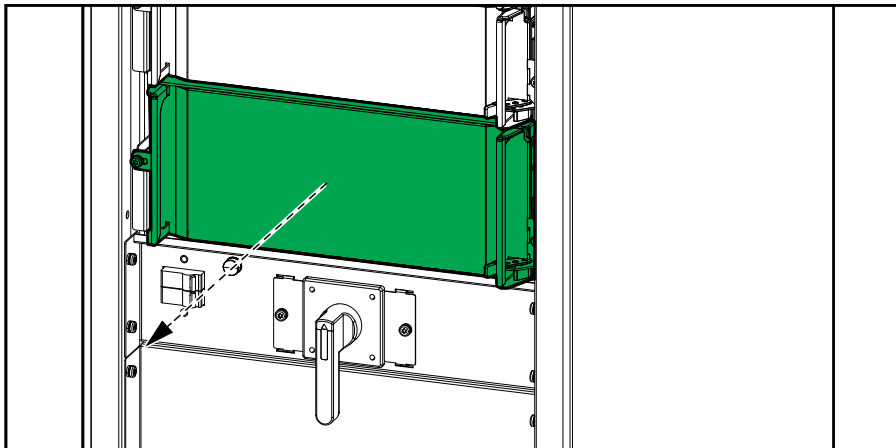
Rear View of the Modular Battery Cabinet



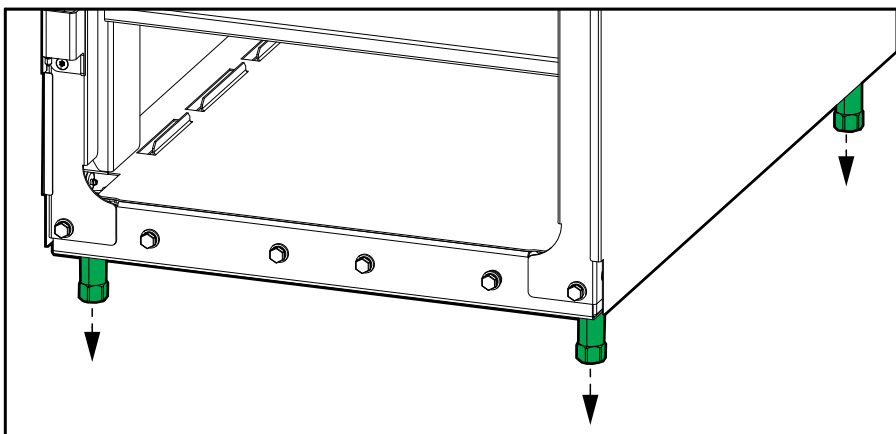
Interconnect Modular Battery Cabinet 1 and the Adjacent UPS

Use installation kit 0H-220042 and optional seismic kit GVSOPT016 for this procedure.

1. Remove the static switch module.



2. Push the UPS into place. For seismic anchoring, ensure that the rear anchoring bracket connects to the rear anchor.
 - a. Lower the front and rear leveling feet with a wrench until they connect with the floor. Note that the UPS must match the height of modular battery cabinet 1. Use a bubble-leveler to check that the UPS is level.
3. Push modular battery cabinet 1 into place. For seismic anchoring, ensure that the rear anchoring bracket connects to the rear anchor.
 - a. Lower the front and rear leveling feet with a wrench until they connect with the floor. Use a bubble-leveler to check that modular battery cabinet 1 is level.



NOTICE

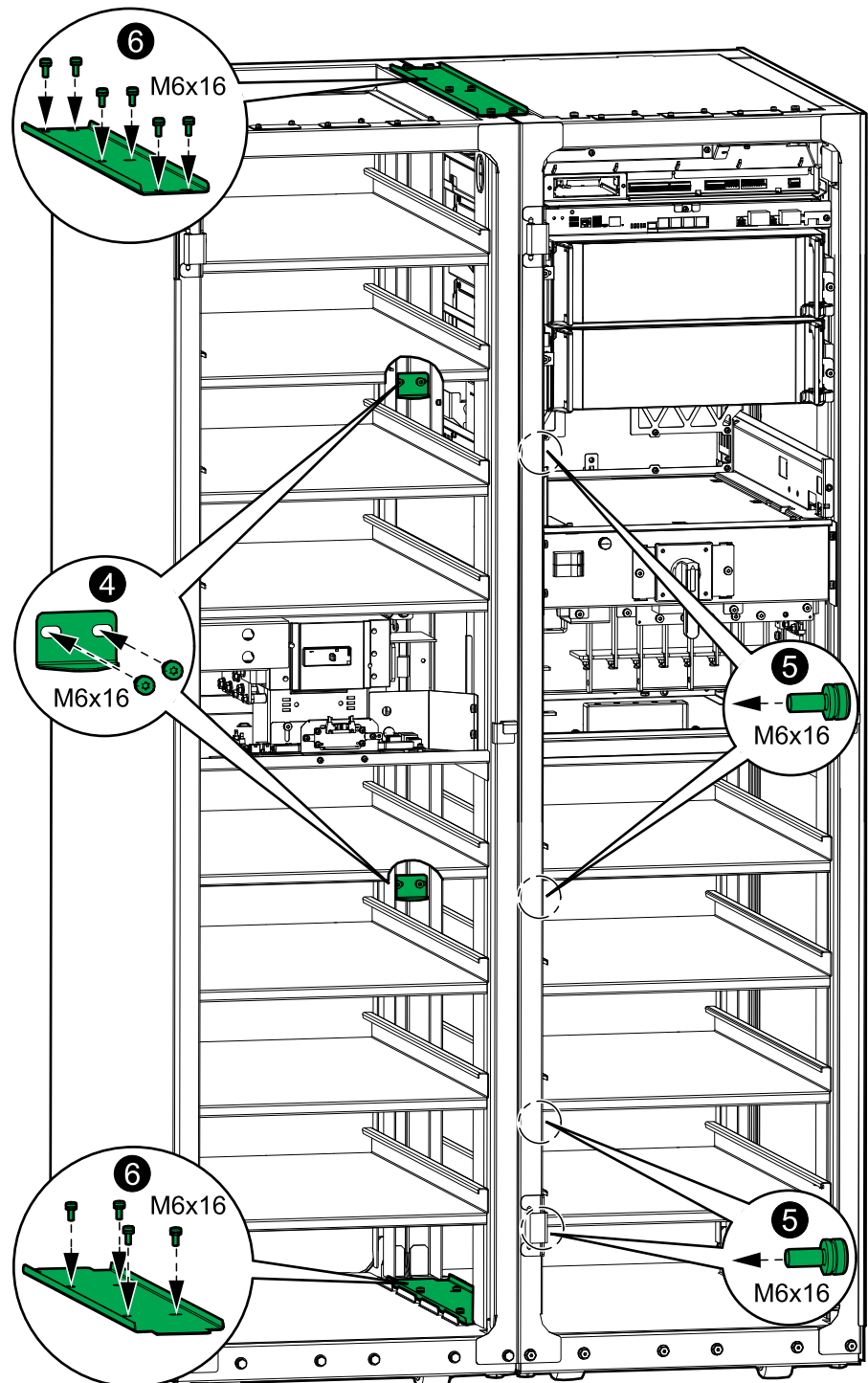
RISK OF EQUIPMENT DAMAGE

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

Failure to follow these instructions can result in equipment damage.

4. **Only for seismic anchoring:** Install the two interconnection brackets between modular battery cabinet 1 and the UPS.

Modular Battery Cabinet 1 and the UPS

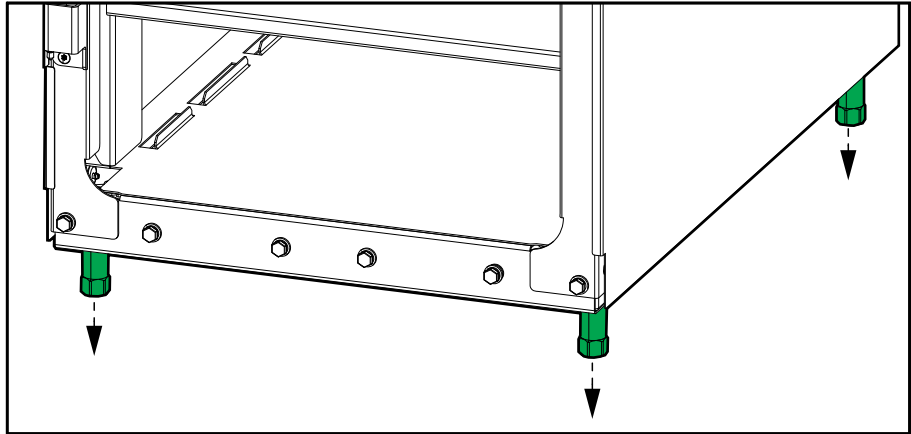


5. Install the interconnection screws between modular battery cabinet 1 and the UPS.
6. Install the baying covers in the top and bottom between modular battery cabinet 1 and the UPS.
7. Reinstall the static switch module.

Interconnect the Modular Battery Cabinets

Use installation kit 0H-220042 and optional seismic kit GVSOPT016 for this procedure.

1. Push the rightmost modular battery cabinet into place.
 - a. Lower the front and rear leveling feet on the modular battery cabinet with a wrench until they connect with the floor. Use a bubble-leveler to check that the cabinet is level.



NOTICE

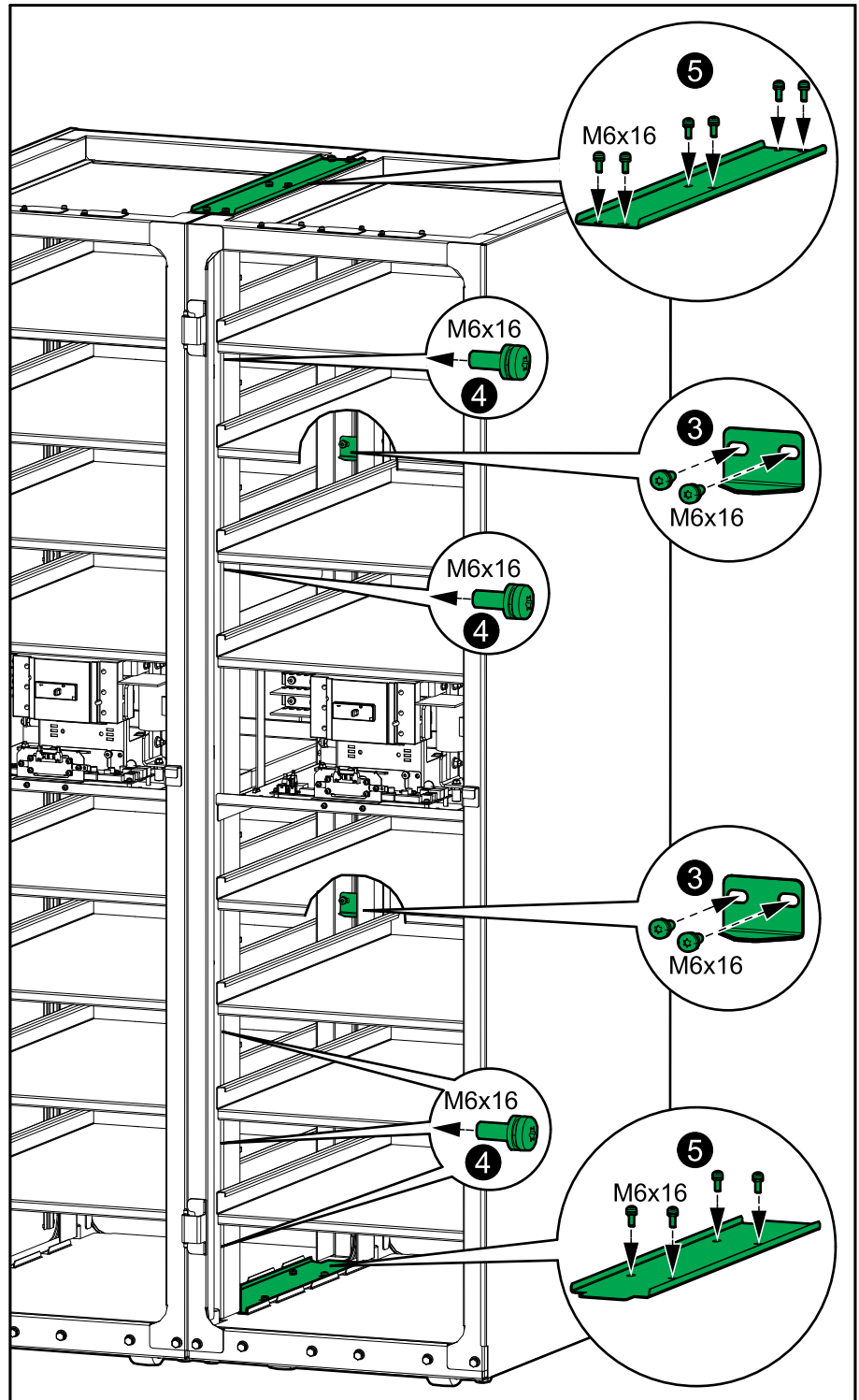
RISK OF EQUIPMENT DAMAGE

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

Failure to follow these instructions can result in equipment damage.

2. Repeat the previous step for each modular battery cabinet.

3. **Only for seismic anchoring:** Install the two interconnection brackets between the modular battery cabinets.



4. Install the interconnection screws between the modular battery cabinets.
5. Install the baying covers in the top and bottom between the modular battery cabinet.

Connect the Power Cables for a UPS Rated for Maximum 100 kW

NOTICE

RISK OF EQUIPMENT DAMAGE

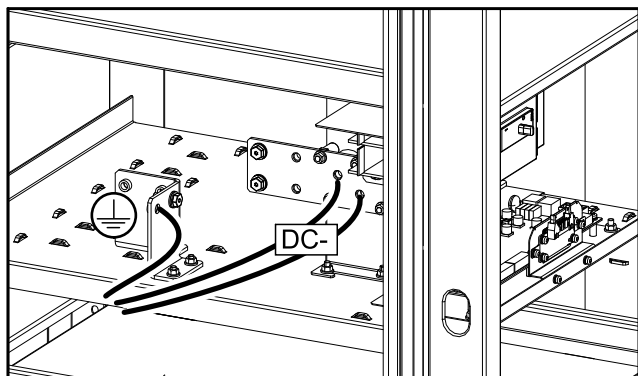
Only connect the DC cables from battery breaker to battery breaker in installations with a UPS rated for maximum 100 kW. For installations with a UPS rated over 100 kW, see [Connect the Power Cables for a UPS Rated over 100 kW](#), page 30.

Failure to follow these instructions can result in equipment damage.

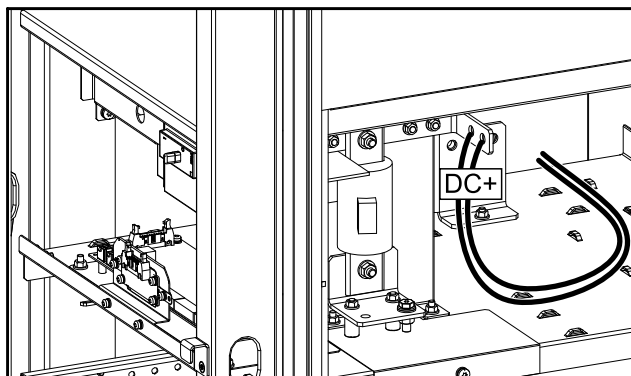
1. Connect the preinstalled PE cables (0W50448) between the modular battery cabinets as shown.
2. Connect the preinstalled DC cables (0W50425) between the modular battery cabinets as shown. Connect DC- to DC- and connect DC+ to DC+ between the modular battery cabinets.

NOTE: The preinstalled DC cables come in pairs: Two cables for DC- connection and two cables for DC+ connection. Ensure to connect all pairs between the modular battery cabinets.

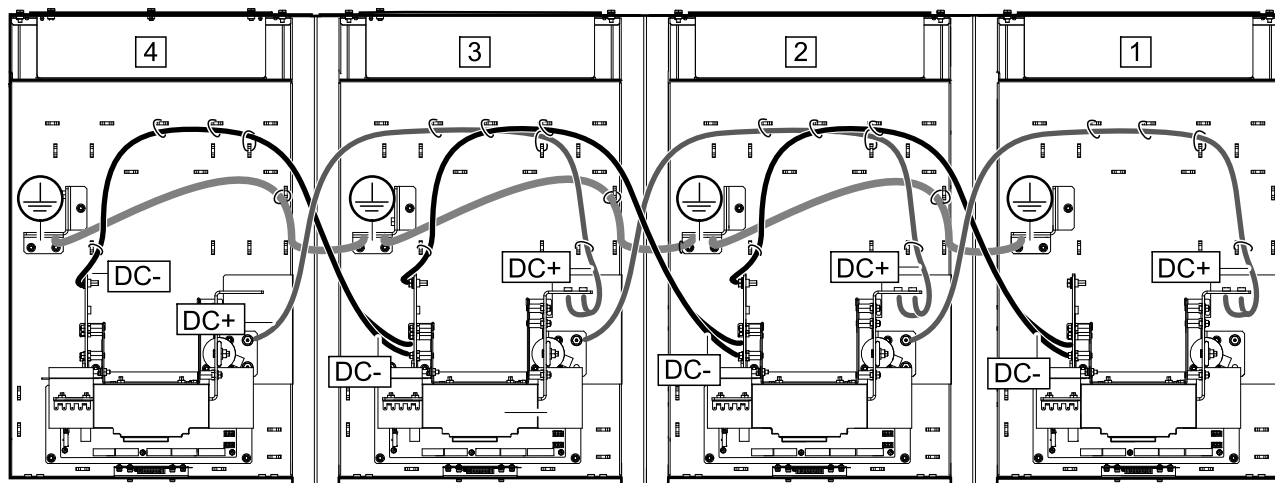
Front Left View of the Modular Battery Cabinet



Front Right View of the Modular Battery Cabinet



Top View of the Modular Battery Cabinets

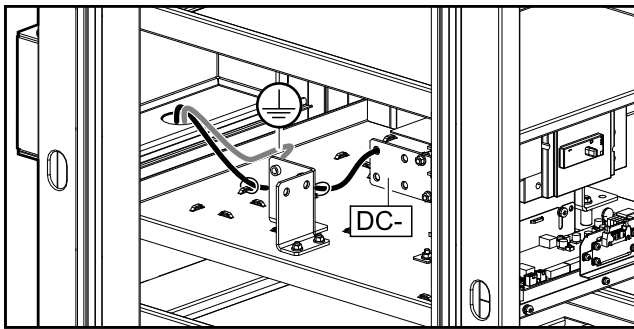


3. **For installation with adjacent UPS:** Follow the UPS installation manual to connect the PE and DC cables in the UPS.

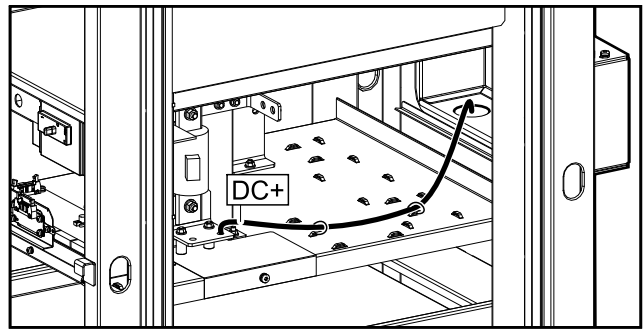
4. For installation with remote UPS:

- a. Optional: You can remove the right side panel from modular battery cabinet 1 for easier access. Reinstall the side panel after power cabling is completed.
- b. Disconnect the preinstalled PE cable and DC cables from modular battery cabinet 1. The preinstalled power cables are not long enough for connection to a remote UPS.
- c. Connect the PE cable and the DC cables (not provided) in modular battery cabinet 1.
- d. Route the PE and DC cables out through the conduit box and into the UPS power cabling area.
- e. Follow the UPS installation manual to connect the PE and DC cables in the UPS.

Front Left View of Modular Battery Cabinet 1



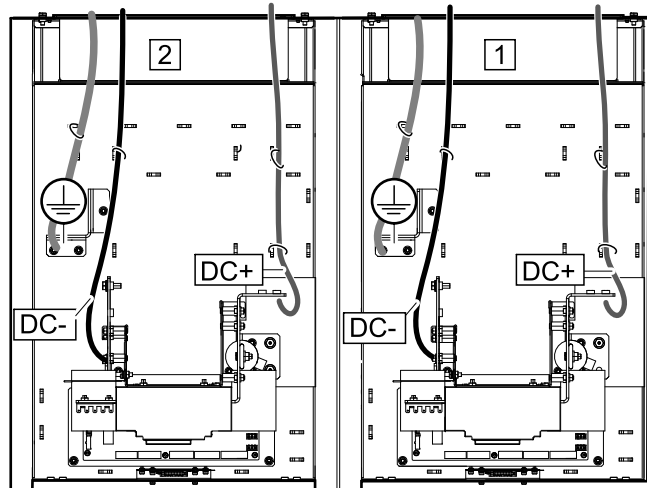
Front Right View of Modular Battery Cabinet 1



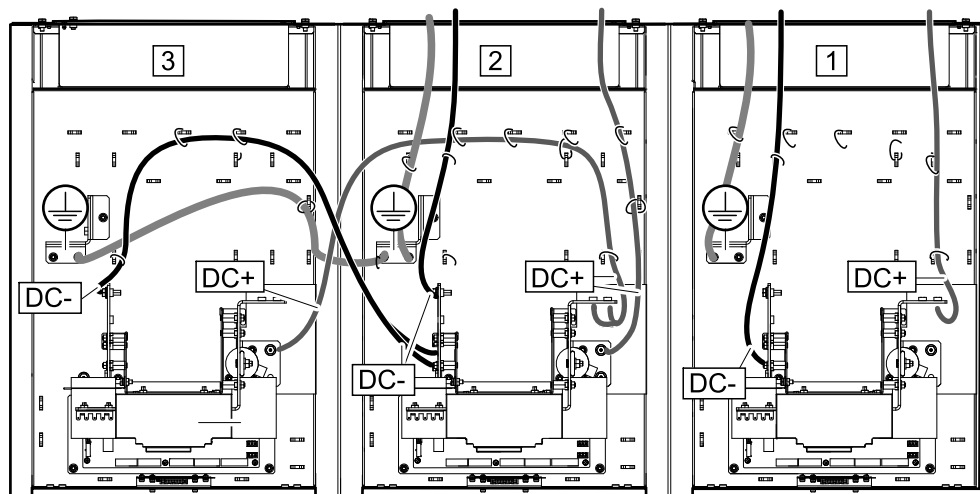
Connect the Power Cables for a UPS Rated over 100 kW

NOTE: The power cabling method depends on the number of modular battery cabinets in your UPS system.

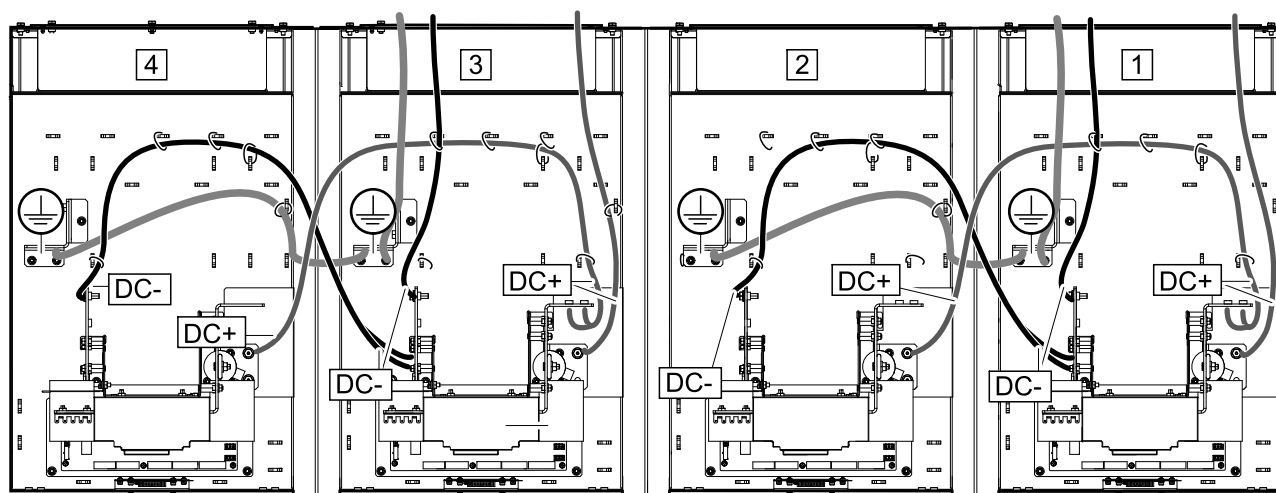
Top View of System with Two Modular Battery Cabinets



Top View of System with Three Modular Battery Cabinets



Top View of System with Four Modular Battery Cabinets

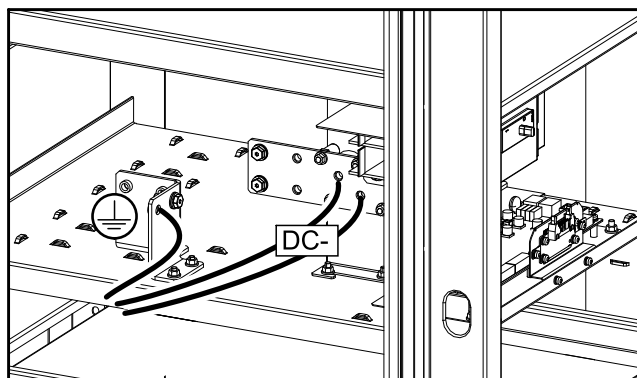


1. For internal power cabling between two modular battery cabinets:

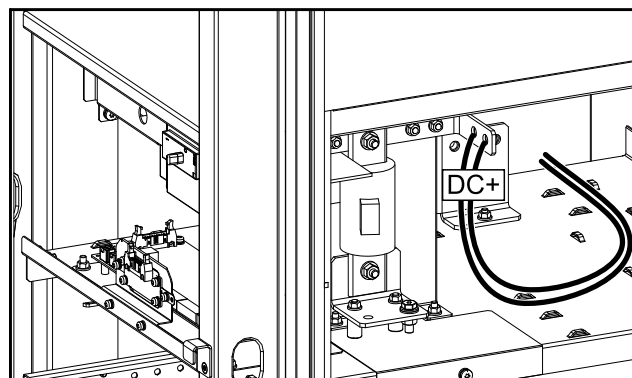
- a. Connect the preinstalled PE cables (0W50448) between the modular battery cabinets as shown.
- b. Connect the preinstalled DC cables (0W50425) between the modular battery cabinets as shown. Connect DC- to DC- and connect DC+ to DC+ between the modular battery cabinets.

NOTE: The preinstalled DC cables come in pairs: Two cables for DC- connection and two cables for DC+ connection. Ensure to connect all pairs between the modular battery cabinets.

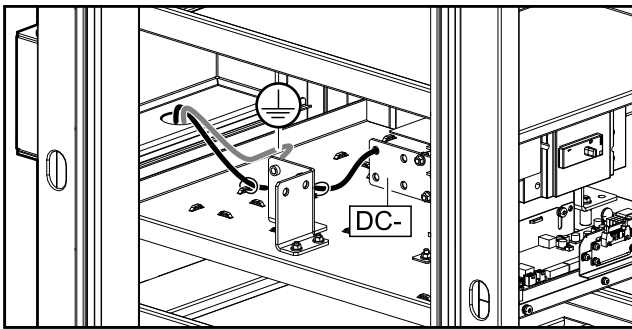
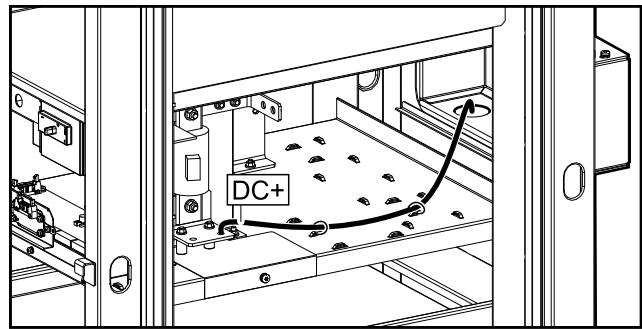
Front Left View of the Modular Battery Cabinet



Front Right View of the Modular Battery Cabinet



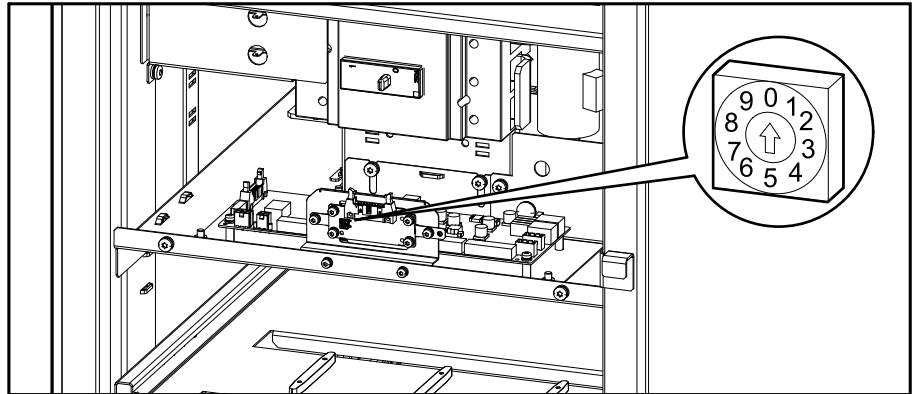
2. For external power cabling between a modular battery cabinet and the UPS:
 - a. Optional: You can remove the right side panel from modular battery cabinet 1 for easier access. Reinstall the side panel after power cabling is completed.
 - b. Disconnect the preinstalled PE cable and DC cables from the modular battery cabinet. The preinstalled power cables are not long enough for connection to a remote UPS.
 - c. Connect the PE cable and the DC cables (not provided) in the modular battery cabinet.
 - d. Route the PE and DC cables out through the conduit box and into the UPS power cabling area.
 - e. Follow the UPS installation manual to connect the PE and DC cables in the UPS.

Front Left View of the Modular Battery Cabinet**Front Right View of the Modular Battery Cabinet**

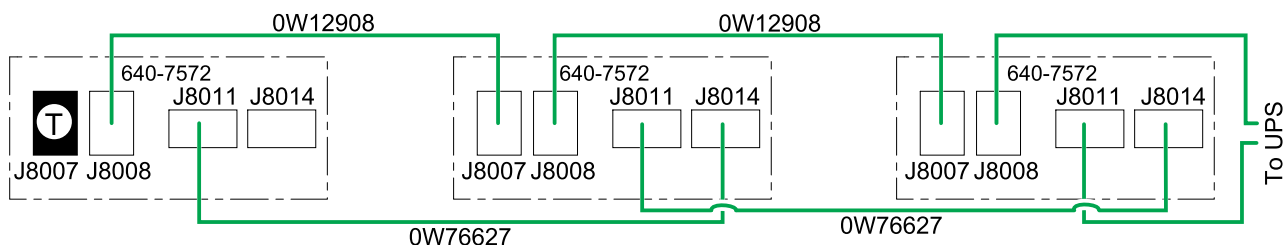
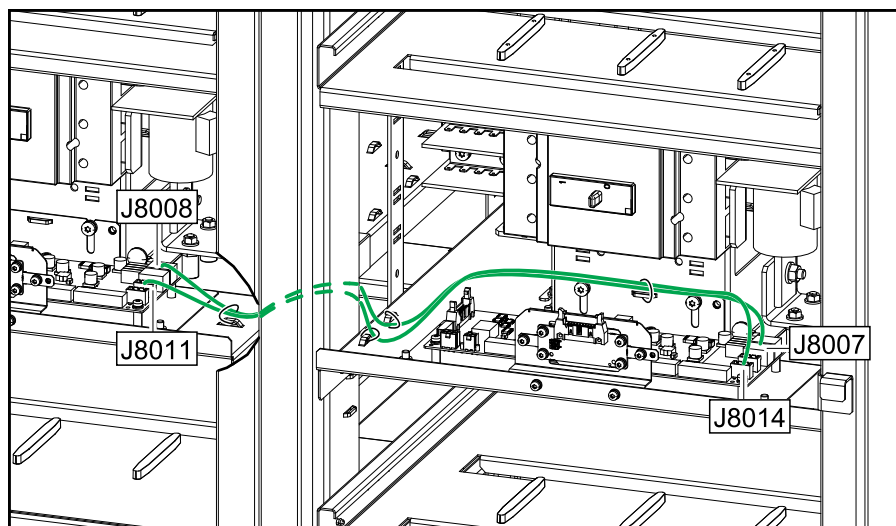
Connect the Signal Cables

1. Assign an ID to each modular battery cabinet with the switch below the battery breaker. Set the IDs according to numbering on the installation overview images in *Installation Procedure for UPS with Internal Batteries*, page 15 or *Installation Procedure for UPS for External Batteries*, page 16.

Front View of the Modular Battery Cabinet



2. Connect the provided signal cables between all the modular battery cabinets:
 - a. Connect the provided signal cable 0W12908 from J8008 to J8007 on board 640-7572 between the modular battery cabinets.
 - b. Connect the provided signal cable 0W76627 from J8011 to J8014 on board 640-7572 between the modular battery cabinets.
 - c. Mount a termination plug (T) in the unused J8007 connector in the last modular battery cabinet.

Modular Battery Cabinet 3**Modular Battery Cabinet 2****Modular Battery Cabinet 1****Front View of Two Modular Battery Cabinets**

3. For installation with adjacent UPS:

- a. Connect the signal cable 0W12908 to J8008 on board 640-7572 in modular battery cabinet 1, route through the right side, and follow the UPS installation manual to connect the signal cables in the UPS.
- b. Connect the provided signal cable 0W76627 to J8011 on board 640-7572 in modular battery cabinet 1, route through the right side, and follow the UPS installation manual to connect the signal cables in the UPS.

4. For installation with remote UPS:

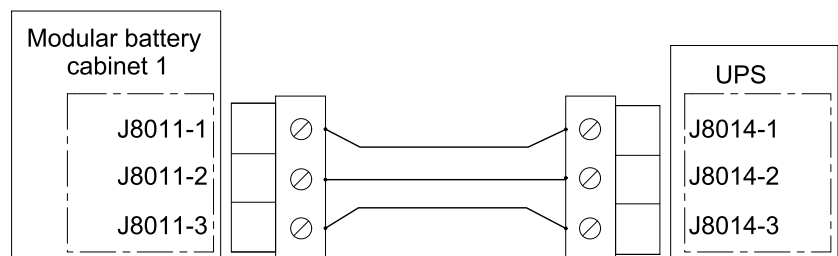
- a. Connect signal cables to J8008 on board 640-7572 in modular battery cabinet 1, route up along the right side and out through the top of the modular battery cabinet, and follow the UPS installation manual to connect the signal cables in the UPS.

NOTE: The provided signal cable 0W12908 is not long enough for a remote UPS installation. A 5 meter signal cable (0J-0W4527) or 50 meter signal cable (0J-0W3758) can be ordered from Schneider Electric. For other signal cable lengths, please contact Schneider Electric. This signal cable is classified as Class 2/SELV.

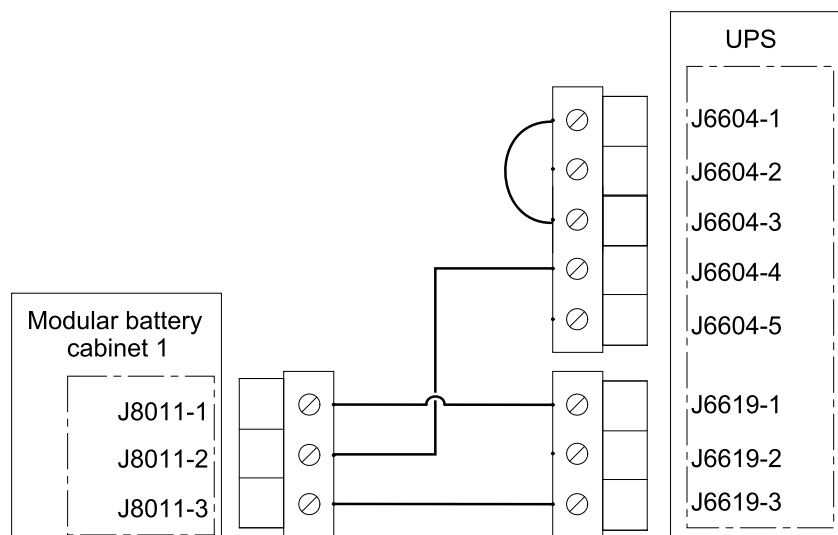
- b. Connect signal cables to J8011 on board 640-7572 in modular battery cabinet 1, route up along the left side and out through the top of the modular battery cabinet, and follow the UPS installation manual to connect the signal cables in the UPS.

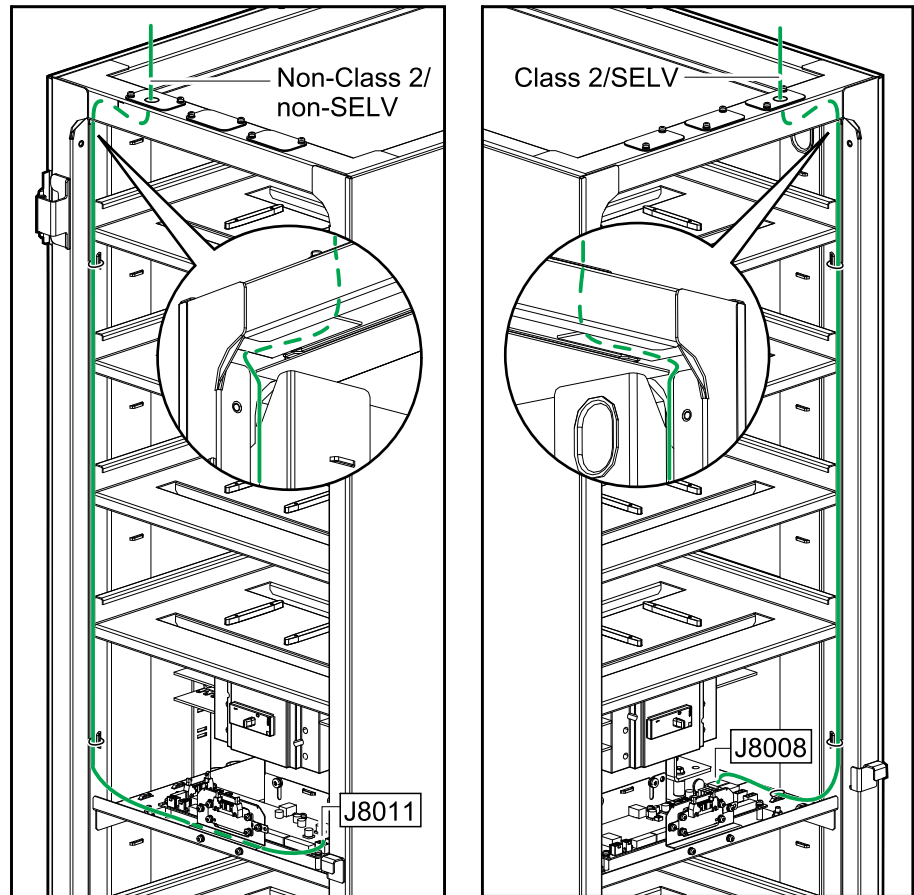
NOTE: The provided signal cable 0W76627 is not long enough for a remote UPS installation. Reuse the connectors from the provided signal cable 0W76627 to make new signal cables in the correct length. This signal cable is classified as non-Class 2/non-SELV.

Signal Cable for UPS with Internal Batteries



Signal Cable for UPS for External Batteries



Front View of Modular Battery Cabinet 1 for Installation with Remote UPS

Add Translated Safety Labels to Your Product

The safety labels on your product are in English and French. Sheets with translated safety labels are provided with your product.

1. Find the sheets with translated safety labels provided with your product.
2. Check which 885-XXX numbers are on the sheet with translated safety labels.
3. Locate the safety labels on your product that match the translated safety labels on the sheet – look for the 885-XXX numbers.
4. Add the replacement safety label in your preferred language to your product on top of the existing French safety label.

Final Installation

Use optional seismic kit GVSOPT016 for this procedure.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Batteries can present a risk of electric shock and high short-circuit current. The following precautions must be observed when working on batteries

- Remove watches, rings, or other metal objects.
- Use tools with insulated handles.
- Wear protective glasses, gloves and boots.
- Do not lay tools or metal parts on top of batteries.
- Disconnect the charging source prior to connecting or disconnecting battery terminals.
- Determine if the battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electric shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance (applicable to equipment and remote battery supplies not having a grounded supply circuit).

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

WARNING

RISK OF EQUIPMENT DAMAGE

Wait until the system is ready to be powered up before installing batteries in the system. The time duration from battery installation until the UPS system is powered up must not exceed 72 hours or 3 days.

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

1. If not done already, lower the front and rear leveling feet on the modular battery cabinet with a wrench until they connect with the floor. Use a bubble-leveler to check that the modular battery cabinet is level.

NOTICE

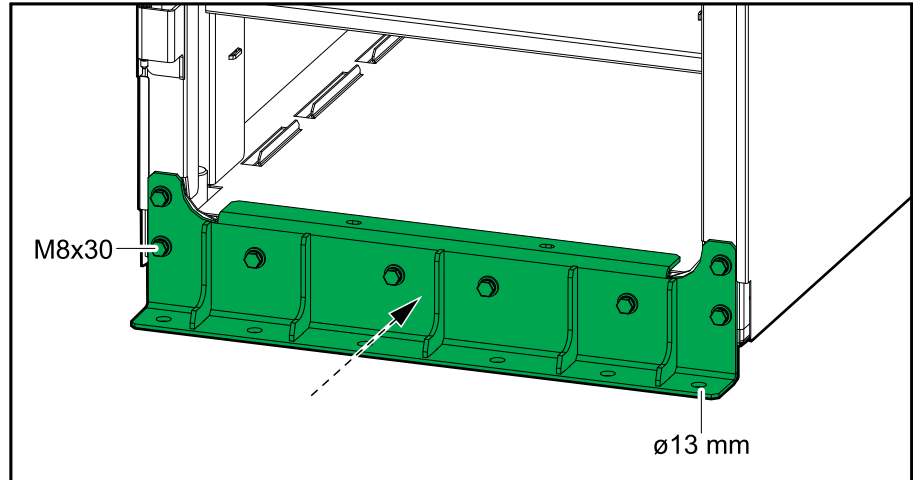
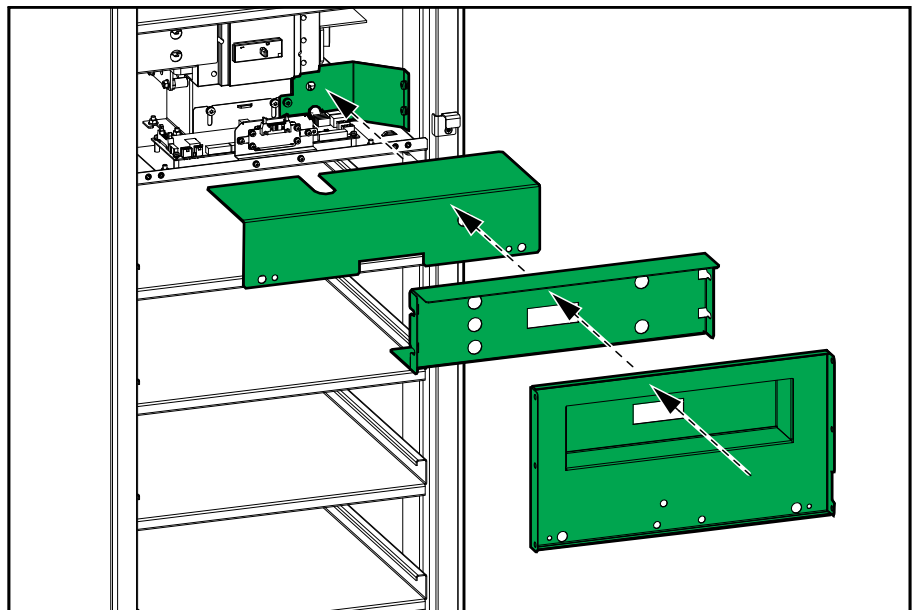
RISK OF EQUIPMENT DAMAGE

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

Failure to follow these instructions can result in equipment damage.

2. Only for seismic anchoring:

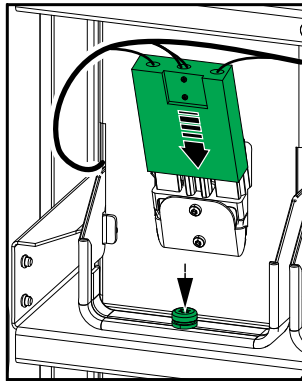
- a. Remove the M8 bolts from the front of the modular battery cabinet.
- b. Install the front anchoring bracket on the modular battery cabinet with the provided M8 bolts.
- c. Mount the front anchoring bracket to the floor. Use appropriate hardware for the floor type – the hole diameter in the front anchoring bracket is $\varnothing 13$ mm. Minimum requirement is M12 grade 8.8 hardware.

**3. Reinstall the indicated plates and covers.**

4. Set the battery breaker BB to the open (OFF) position.
5. Push the battery modules into the slot. Fill the shelves from the bottom and upwards. Always install a complete battery string (four battery modules) on each shelf.
6. Turn down the battery module handle and fasten the handle to the shelf with the provided screw.

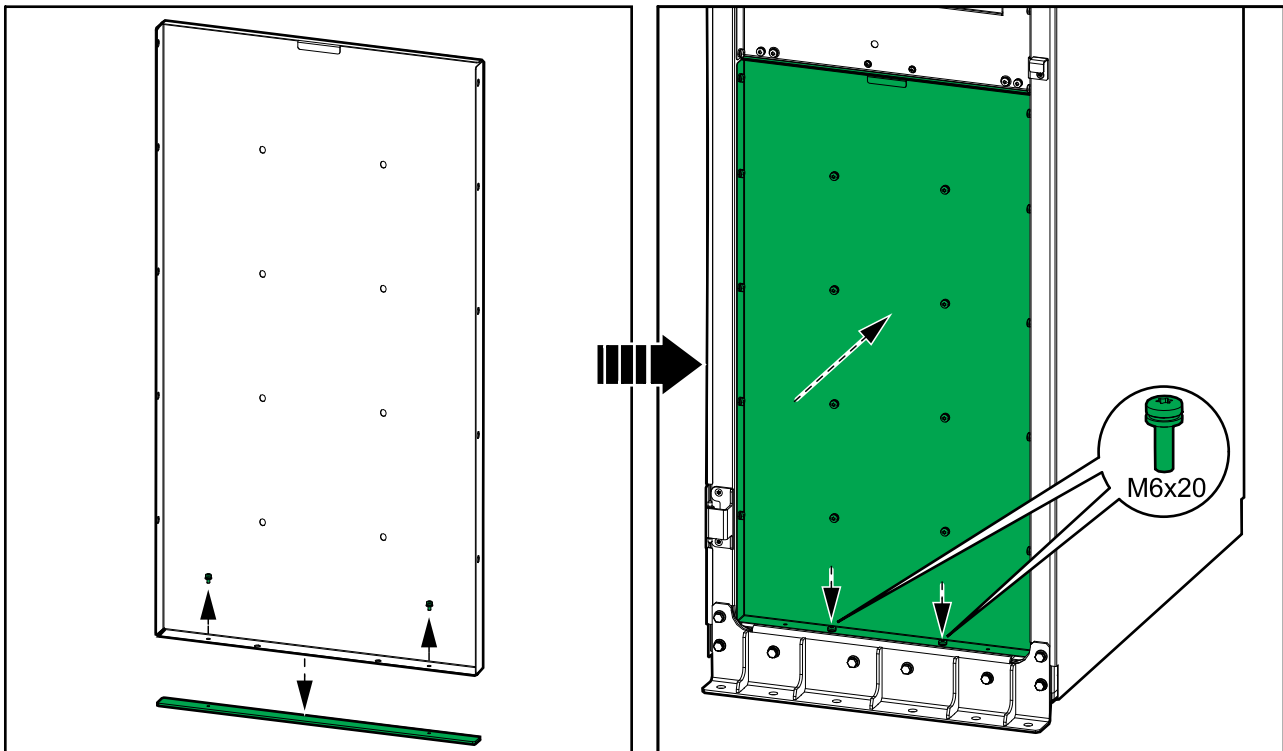
7. Connect the battery terminals to the front of the battery modules.

Front View of Battery Module

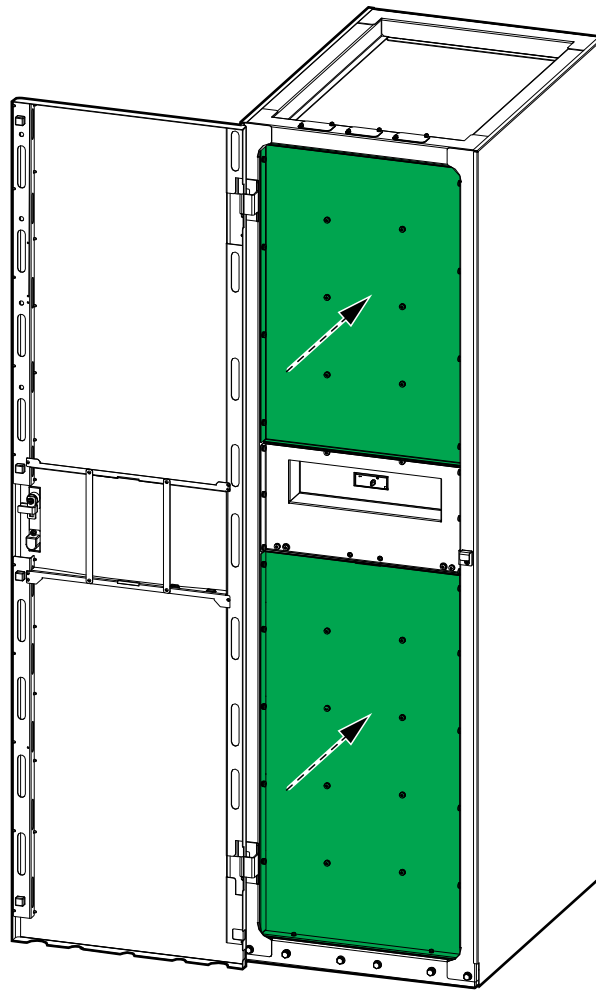


8. **Only for seismic anchoring:** Remove the narrow plate from the bottom of the lower battery cover and reinstall the lower battery cover.

NOTE: When reinstalling the lower battery cover, note that the screws in the bottom must be installed in the two center holes now. Use the two M6 screws from the optional seismic kit GVSOPT016.



9. Reinstall the battery covers.



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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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