

# Galaxy VS

## Modular Battery Cabinet

### Installation

Up to 6 Battery Strings  
GVSMODBC6

6/2019



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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 interference, 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.**

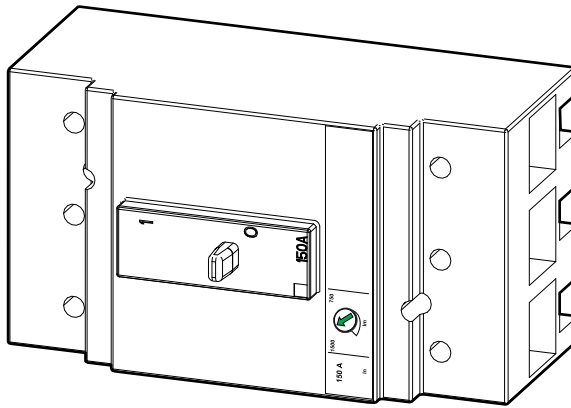
# Modular Battery Cabinet Specifications

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

Maximum four modular battery cabinets can be connected to a UPS.

Number of battery blocks	40
Number of battery strings	Up to 6
Nominal battery voltage (VDC)	480
Nominal float voltage (VDC)	545
Maximum boost voltage (VDC)	571
Temperature compensation	Enabled
End of discharge voltage (full load) (VDC)	384
Maximum battery current (A)	150
Maximum short circuit rating	3.8 kA

## Trip Settings for Battery Breaker



Breaker type	JDF36150
I <sub>r</sub> (A)	150 (fixed)
I <sub>m</sub>	5-10 I <sub>r</sub>

## 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-	35 mm <sup>2</sup>
DC PE	16 mm <sup>2</sup>

## 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) 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-	1 AWG
DC PE	6 AWG

## 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

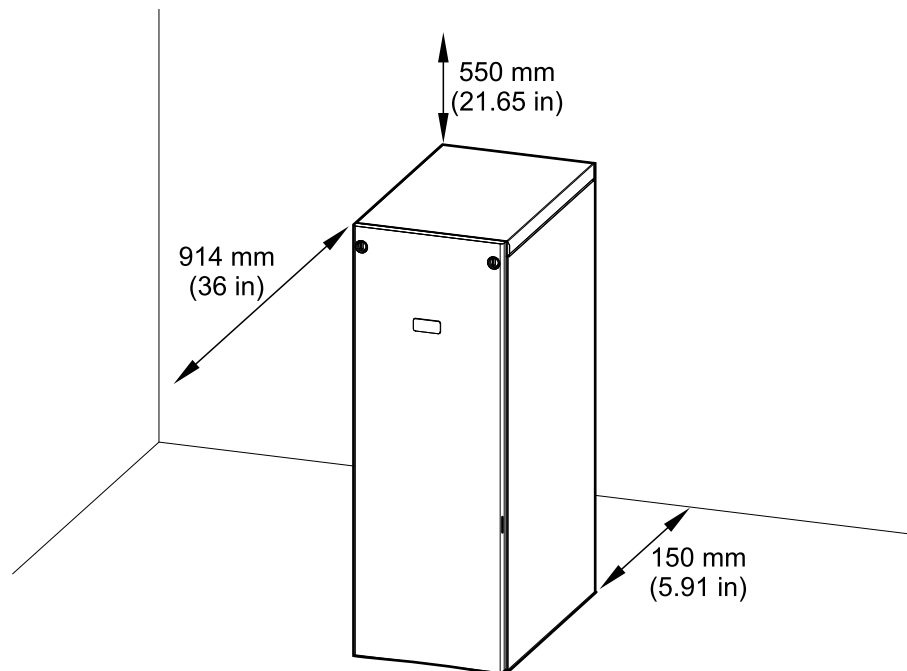
	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
GVSMODBC6 – Empty – With six battery strings	145 (319.67) 913 (2012.82)	1485 (58.46)	521 (20.51)	847 (33.35)

**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).



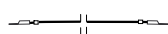


## Environment






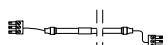
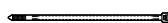
	<b>Operating</b>	<b>Storage</b>
Temperature	0 °C to 40 °C (32 °F to 104 °F)	-15 °C to 40 °C (5 °F to 104 °F)

# Overview of Installation Kits






## Installation Kit 0H-9330

Part	Used in	Number of units
Baying cover	<i>Interconnect Modular Battery Cabinet 1 and the Adjacent UPS with Internal Batteries, page 23, or Interconnect Modular Battery Cabinet 1 and the Adjacent UPS for External Batteries, page 24, and Interconnect the Modular Battery Cabinets, page 27.</i>	1 
PE cable 0W49449	<i>Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28 or Connect the Power Cables for a UPS Rated over 50 kW, page 31.</i>	1 
DC cable 0W49426	<i>Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28.</i>	2 

## Installation Kit 0H-9332






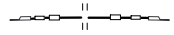
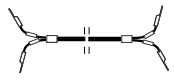

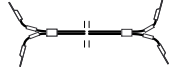
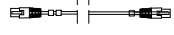
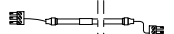
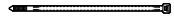

Part	Used in	Number of units
M6 x 16 mm screw with washer	<i>Interconnect Modular Battery Cabinet 1 and the Adjacent UPS with Internal Batteries, page 23 and Interconnect the Modular Battery Cabinets, page 27.</i>	9 
Interconnection bracket		3 
M6 nut with washer	<i>Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28 or Connect the Power Cables for a UPS Rated over 50 kW, page 31.</i>	5 
M6 x 20 mm bolt with washer		6 
Signal cable 0W12680	<i>Connect the Signal Cables, page 34.</i>	1 
Signal cable 0W76629		1 
Cable ties	<i>Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28 or Connect the Power Cables for a UPS Rated over 50 kW, page 31.</i>	18 

## Optional Seismic Kit GVSOPT002

Part	Used in	Number of units
M8 x 20 mm bolt with washer	<i>Install the Seismic Anchoring (Option), page 22 and Final Installation, page 39.</i>	12 
Rear anchor		1 
Rear anchoring bracket		1 
Front anchoring bracket		1 
Rear connection plate		1 

## Optional Kit GVSOPT030

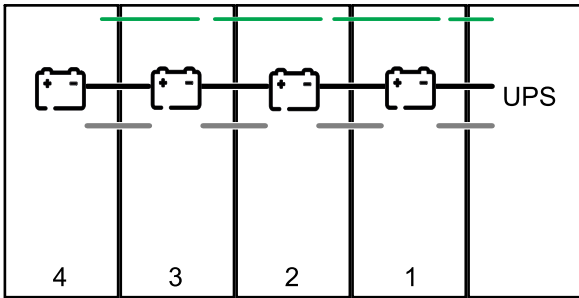
Only for installation with an adjacent UPS for external batteries.

Part	Used in	Number of units
Interconnection clamp	<i>Interconnect Modular Battery Cabinet 1 and the Adjacent UPS for External Batteries, page 24.</i>	3 
M6 x 16 mm screw with washer		3 
M6 nut with washer		3 
M8 x 25 mm bolt with washer	<i>Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28 or Connect the Power Cables for a UPS Rated over 50 kW, page 31.</i>	9 
M8 nut with washer		9 
PE cable 0W13065 (for modular battery cabinet 1)		1 
DC cable 0W13071 (for modular battery cabinet 1)		1 
DC cable 0W13066 (for modular battery cabinet 2)		<i>Connect the Power Cables for a UPS Rated over 50 kW, page 31.</i>
DC cable 0W13068 (for modular battery cabinet 3)	1 	
DC cable 0W13067 (for modular battery cabinet 4)	1 	
Signal cable 0W13070	<i>Connect the Signal Cables, page 34.</i>	1 
Signal cable 0W13069		1 
Cable tie	<i>Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28 or Connect the Power Cables for a UPS Rated over 50 kW, page 31.</i>	18 
Cable tie	<i>Interconnect Modular Battery Cabinet 1 and the Adjacent UPS for External Batteries, page 24.</i>	30 

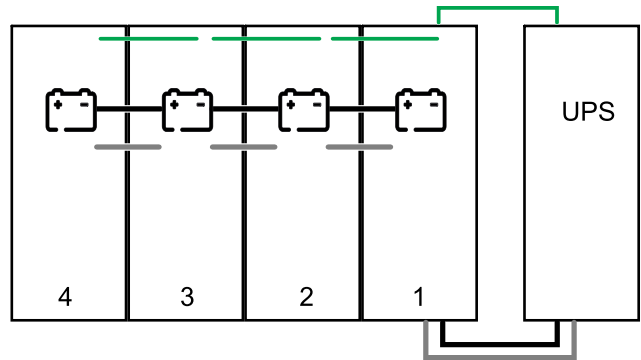


# Installation Procedure

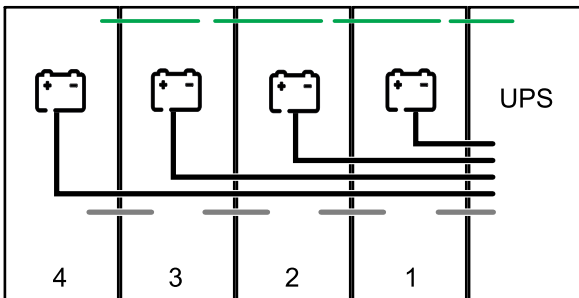
**Modular Battery Cabinets and Adjacent UPS Rated for Maximum 50 kW**



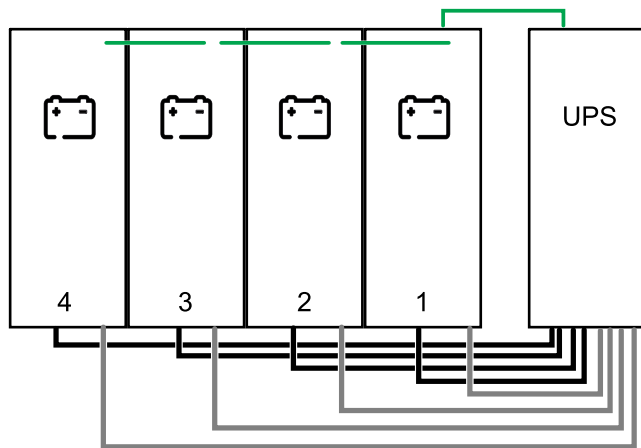
**Modular Battery Cabinets and Remote UPS Rated for Maximum 50 kW**



**Modular Battery Cabinets and Adjacent UPS Rated over 50 kW**



**Modular Battery Cabinets and Remote UPS Rated over 50 kW**



- Signal cable
- Power cable
- PE cable

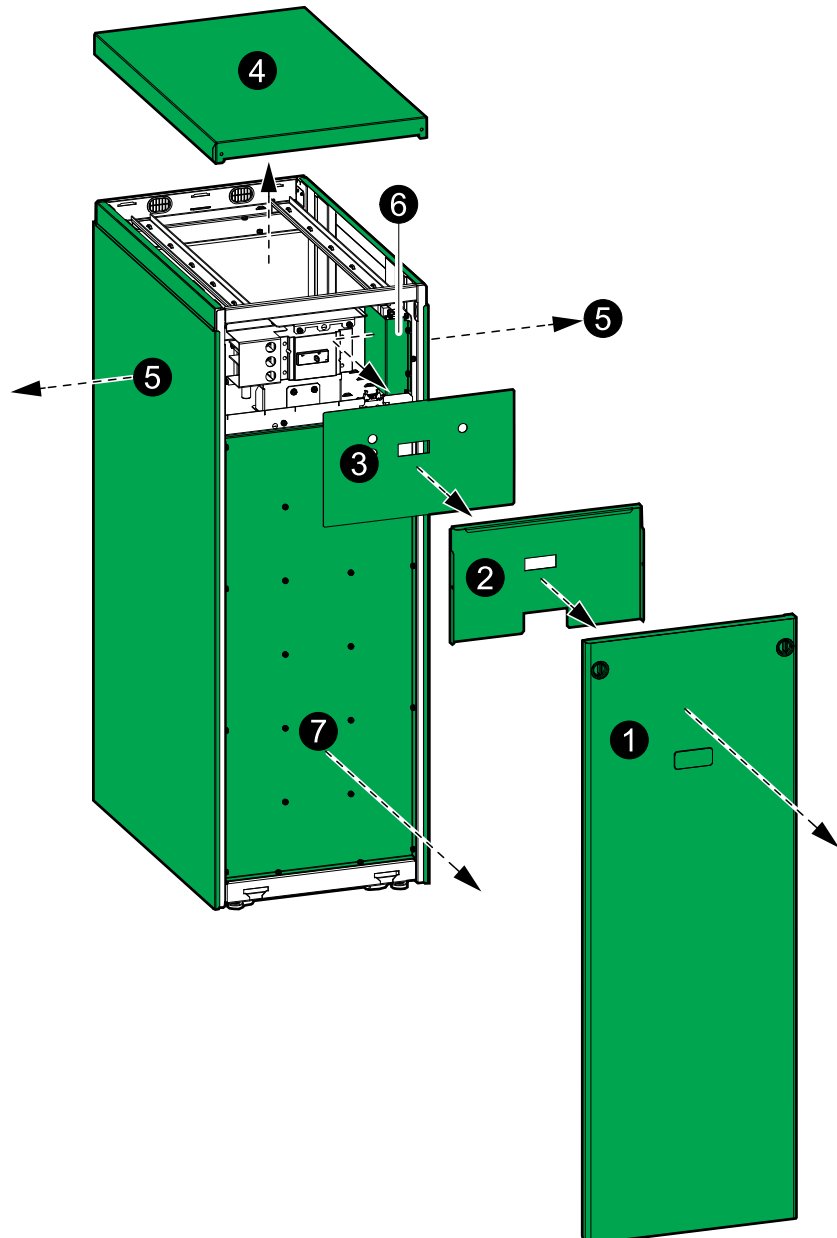
**NOTE:** The distance between the modular battery cabinet(s) and the UPS must not exceed 100 m. Contact Schneider Electric for installations with a longer distance.

1. Follow the UPS manual to prepare the UPS for installation.
2. *Prepare for Installation, page 19.*
3. **For remote installation:**
  - a. *Install the Conduit Box on the Modular Battery Cabinet, page 20, and*
  - b. *Prepare Modular Battery Cabinet 1 for Signal Cables, page 21.*
4. Option: *Install the Seismic Anchoring (Option), page 22.*
5. **For adjacent installation:** Perform one of the following:
  - *Interconnect Modular Battery Cabinet 1 and the Adjacent UPS with Internal Batteries, page 23, or*
  - *Interconnect Modular Battery Cabinet 1 and the Adjacent UPS for External Batteries, page 24.*
6. *Interconnect the Modular Battery Cabinets, page 27.*

7. Perform one of the following:
  - *Connect the Power Cables for a UPS Rated for Maximum 50 kW, page 28, or*
  - *Connect the Power Cables for a UPS Rated over 50 kW, page 31.*
8. *Connect the Signal Cables, page 34.*
9. *Add Translated Safety Labels to Your Product, page 38.*
10. *Final Installation, page 39.*

## Prepare for Installation

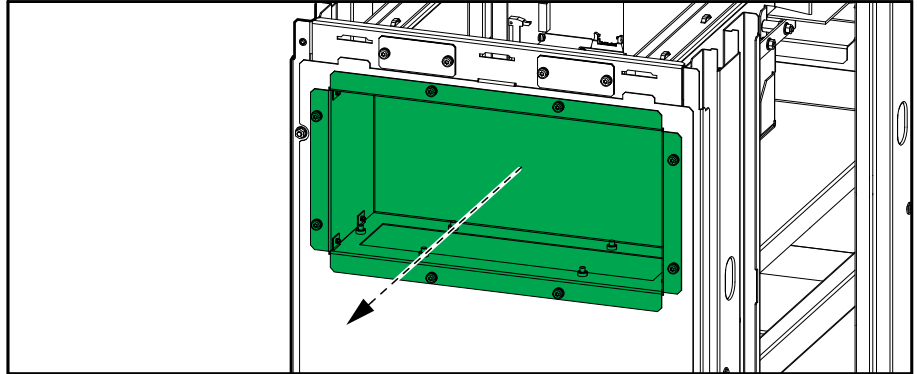
1. Remove the front panel.
2. Remove the upper plate.
3. Remove the transparent plate.
4. Remove the top cover.
5. Remove side panels that will be adjacent to another modular battery cabinet or an adjacent UPS.
6. Remove the cover from board 640-7552.
7. Remove the battery cover.



# Install the Conduit Box on the Modular Battery Cabinet

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

## 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**

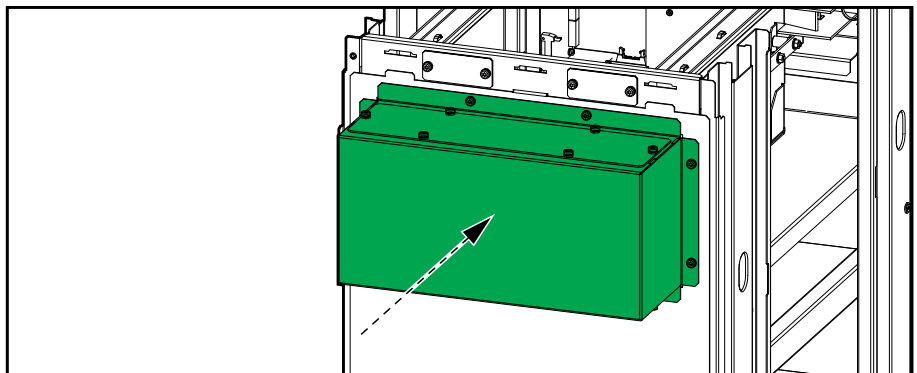
### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

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(s). Note that the conduit box is installed in the reverse position.

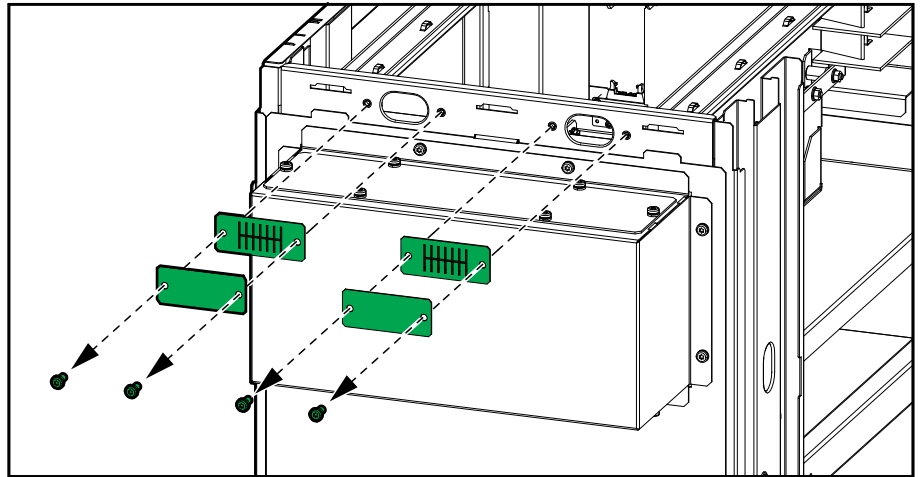
## Rear View of the Modular Battery Cabinet



# Prepare Modular Battery Cabinet 1 for Signal Cables

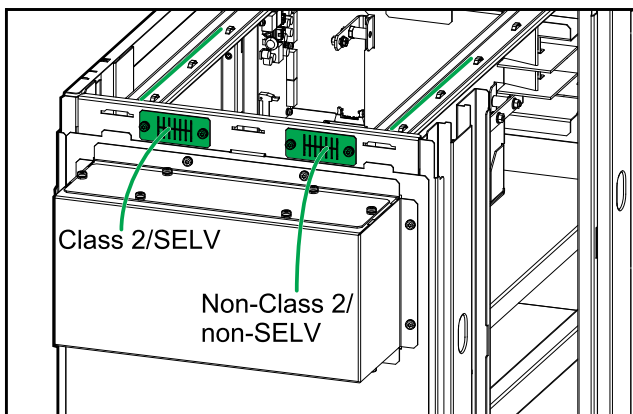
1. Remove the gland plates and the brush plates from the rear of modular battery cabinet 1.

## Rear View of Modular Battery Cabinet 1

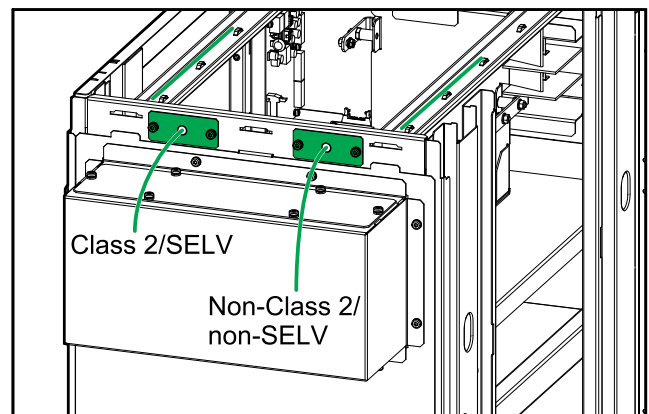


2. Perform one of the following:
  - **For installation without conduits:** Reinstall the brush plates.
  - **For installation with conduits:** Drill a hole in the gland plates for conduits, install conduits, and reinstall the gland plates.

## Rear View of Modular Battery Cabinet 1 without Conduits



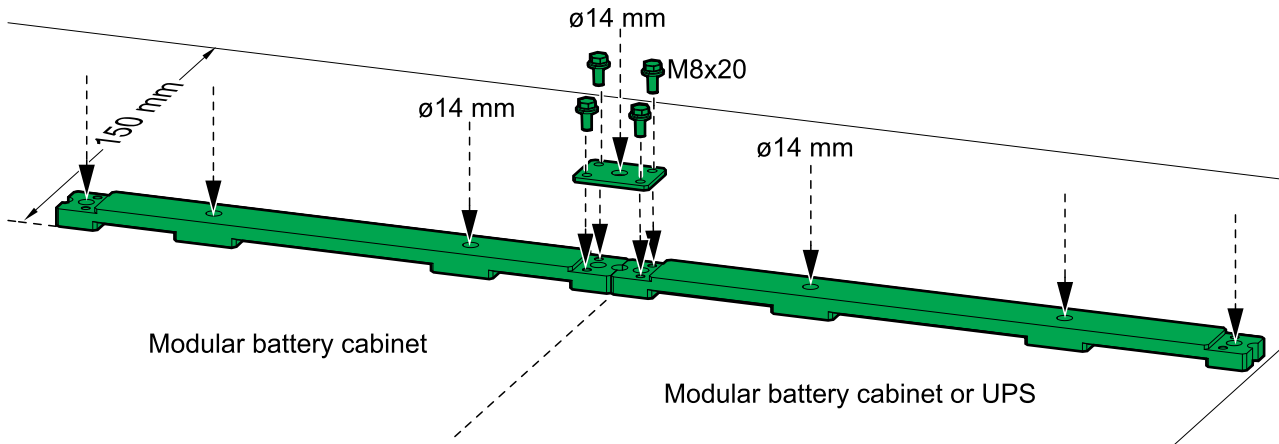
## Rear View of Modular Battery Cabinet 1 with Conduits



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

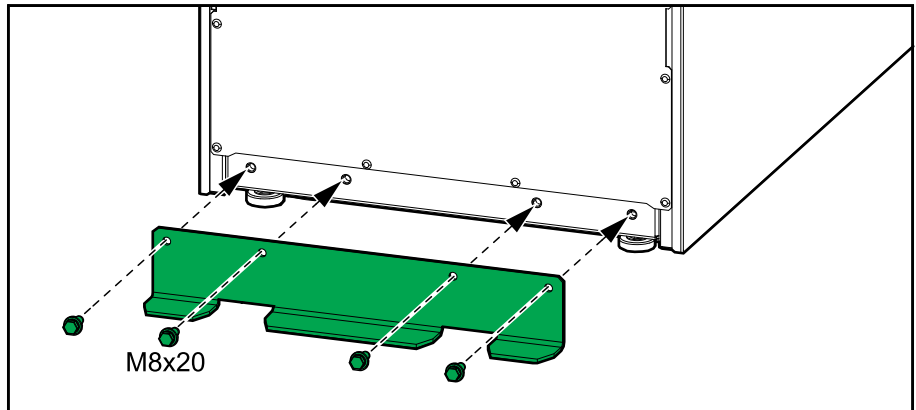
# Install the Seismic Anchoring (Option)

1. Mount the rear anchor(s) to the floor. Use appropriate hardware for the floor type – the hole diameter in the rear anchor is  $\varnothing 14$  mm. Use the rear interconnection plate with multiple modular battery cabinets and/or an adjacent UPS.



2. Install the rear anchoring bracket on the modular battery cabinet(s) with the provided M8 bolts.

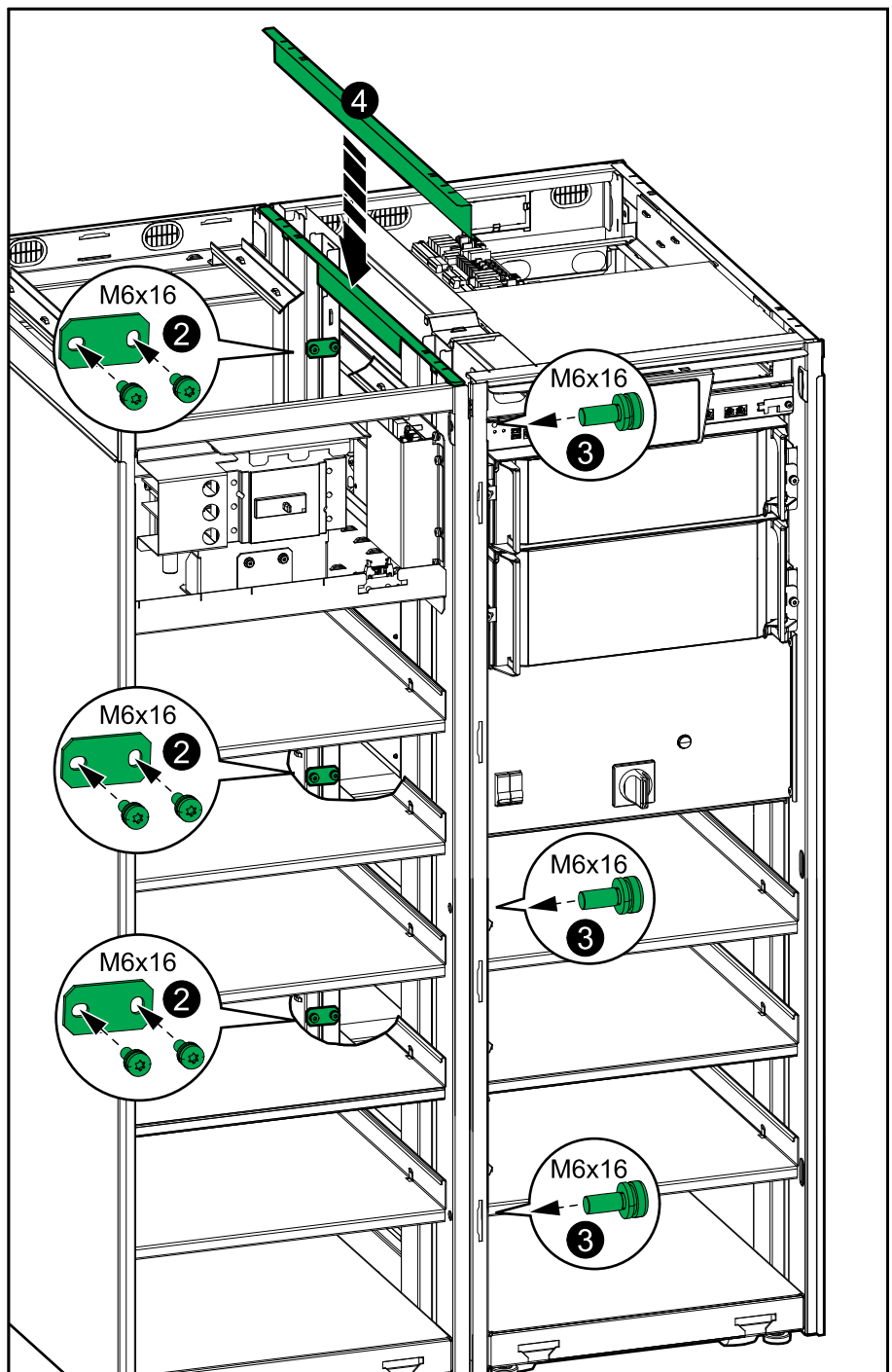
## Rear View of the Modular Battery Cabinet



# Interconnect Modular Battery Cabinet 1 and the Adjacent UPS with Internal Batteries

1. Push modular battery cabinet 1 and the UPS into place.
2. Install the three interconnection brackets between modular battery cabinet 1 and the UPS.
3. Install the three interconnection screws between modular battery cabinet 1 and the UPS.
4. Push the baying cover down between modular battery cabinet 1 and the UPS.

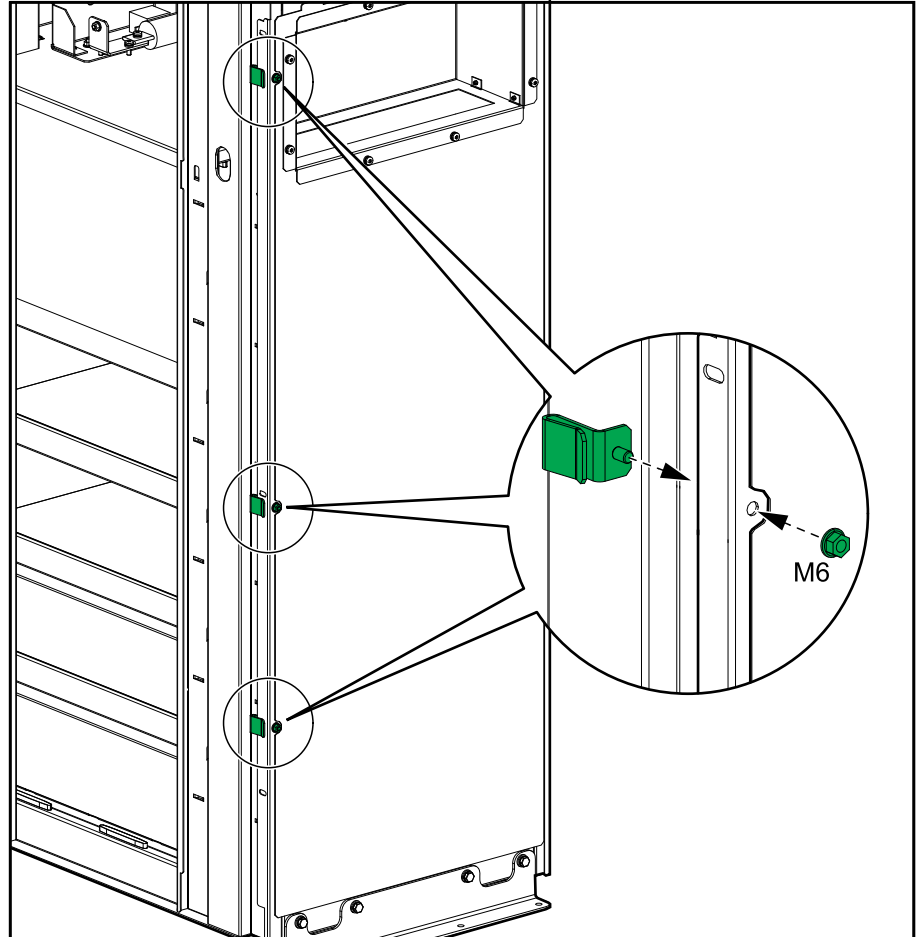
## Modular Battery Cabinet 1 and the UPS



# Interconnect Modular Battery Cabinet 1 and the Adjacent UPS for External Batteries

1. Push the UPS into place.
2. Install the three interconnection clamps on modular battery cabinet 1.

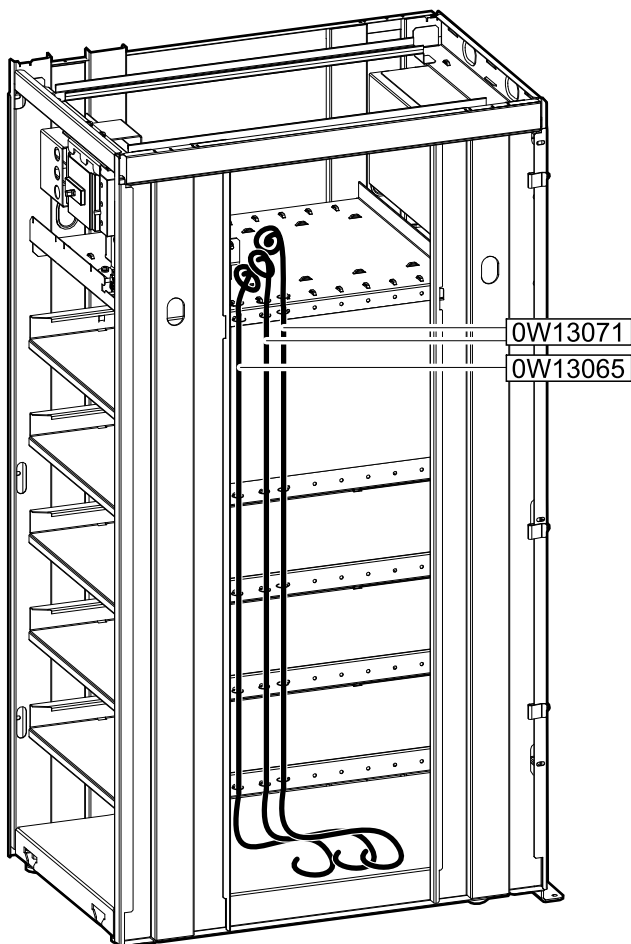
## Rear View of Modular Battery Cabinet 1



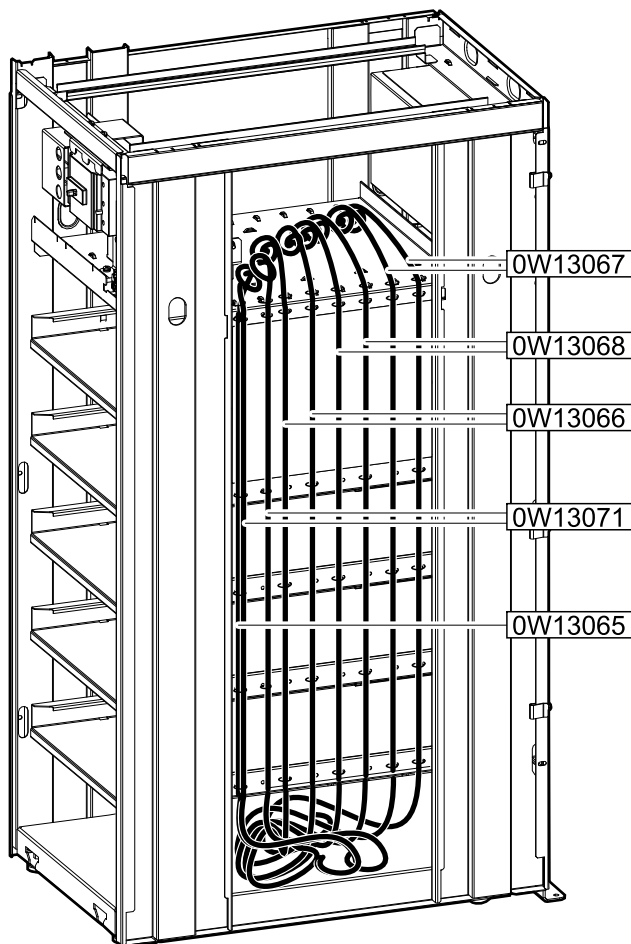


3. Fasten the DC cables and the PE cable from optional kit GVSOPT030 on the right side of modular battery cabinet 1 with the provided cable ties. Place the cable ends temporarily in the top and in the bottom shelf of modular battery cabinet 1, so the cables do not get damaged during the interconnection with the UPS. Cable connections are described in *Connect the Power Cables for a UPS Rated for Maximum 50 kW*, page 28 or *Connect the Power Cables for a UPS Rated over 50 kW*, page 31.

**Adjacent UPS for External Batteries Rated for Maximum 50 kW**



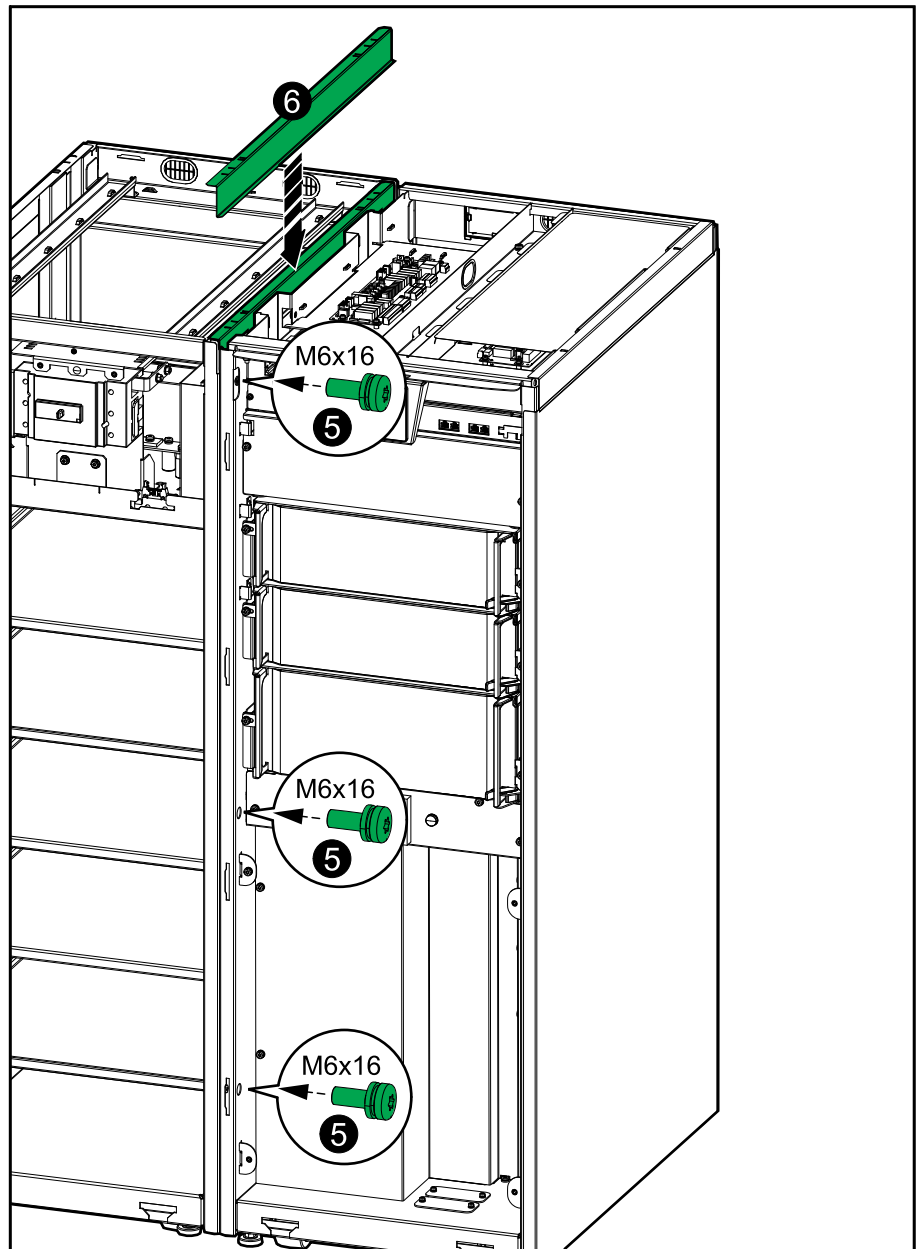
**Adjacent UPS for External Batteries Rated over 50 kW**



4. Align modular battery cabinet 1 with the UPS. Push in modular battery cabinet 1 until the holes for the front interconnection screws are aligned with the holes in the UPS. The interconnection clamps will connect to the UPS when in the correct position.
5. Install the three interconnection screws between modular battery cabinet 1 and the UPS.

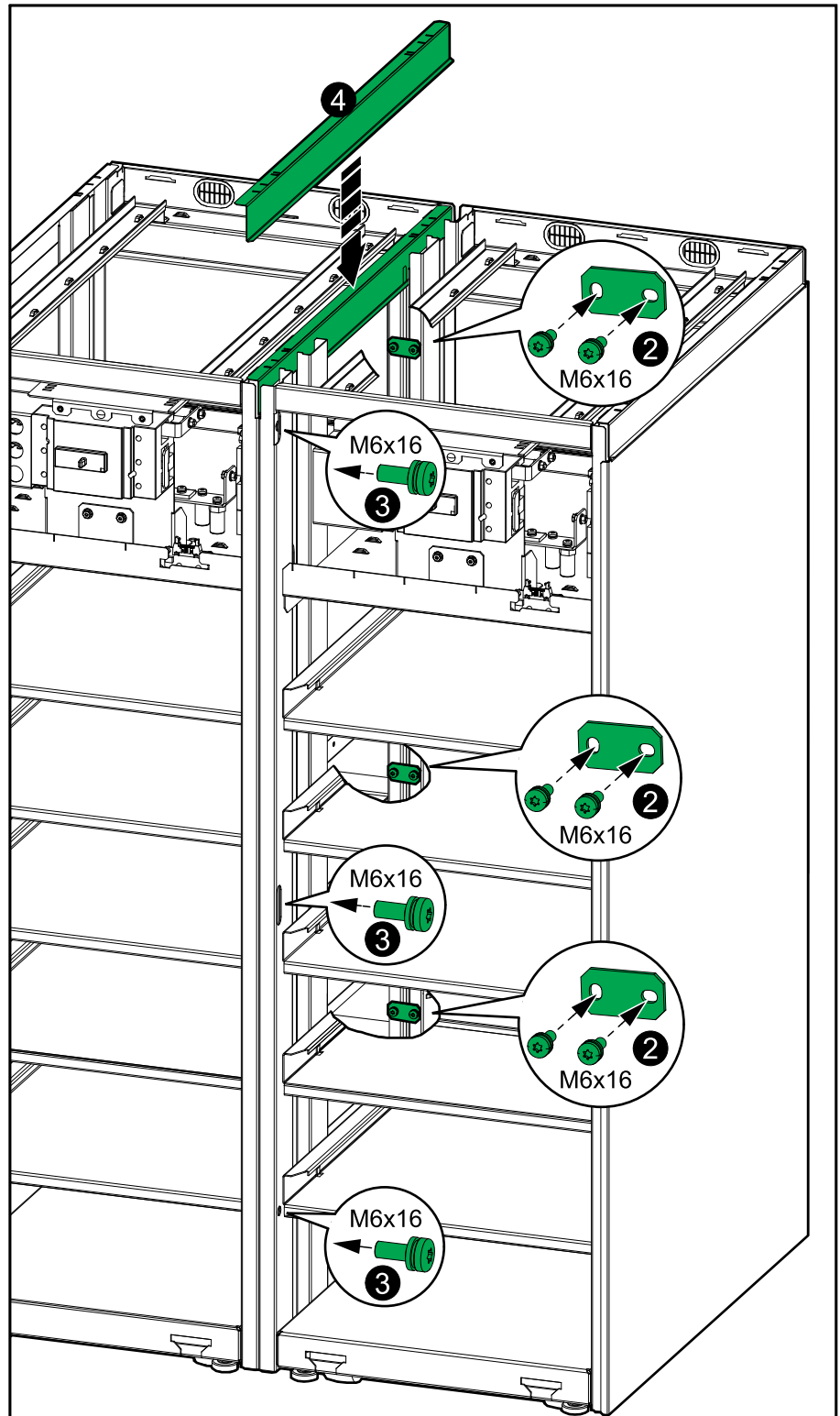
6. Push the baying cover down between modular battery cabinet 1 and the UPS.

**Modular Battery Cabinet 1 and the UPS for External Batteries**



# Interconnect the Modular Battery Cabinets

1. Push the modular battery cabinets into place. For seismic anchoring, ensure that the rear anchoring brackets connects to the rear anchors.
2. Install the three interconnection brackets between the modular battery cabinets.



3. Install the three interconnection screws between the modular battery cabinets.
4. Push the baying cover down between the modular battery cabinets.

# Connect the Power Cables for a UPS Rated for Maximum 50 kW

## NOTICE

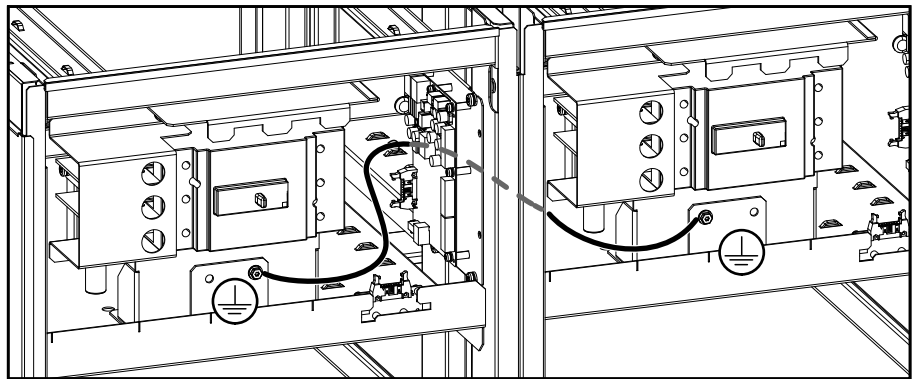
### RISK OF EQUIPMENT DAMAGE

Only connect the DC cables from battery breaker to battery breaker in installations with a UPS rated for maximum 50 kW. For installations with a UPS rated over 50 kW, the DC cables from each modular battery cabinet must be connected directly in the UPS. See *Connect the Power Cables for a UPS Rated over 50 kW*, page 31.

**Failure to follow these instructions can result in equipment damage.**

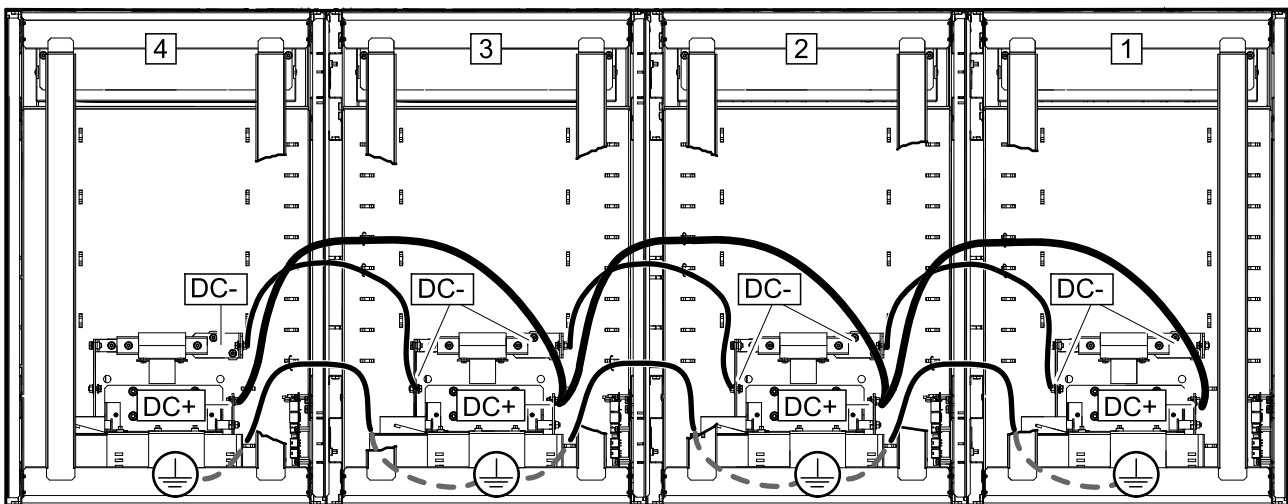
1. Connect the provided PE cable (0W49449) between the modular battery cabinets as shown.

### Front View of Two Modular Battery Cabinets



2. Connect the provided DC cables (0W49426) between the modular battery cabinets as shown.

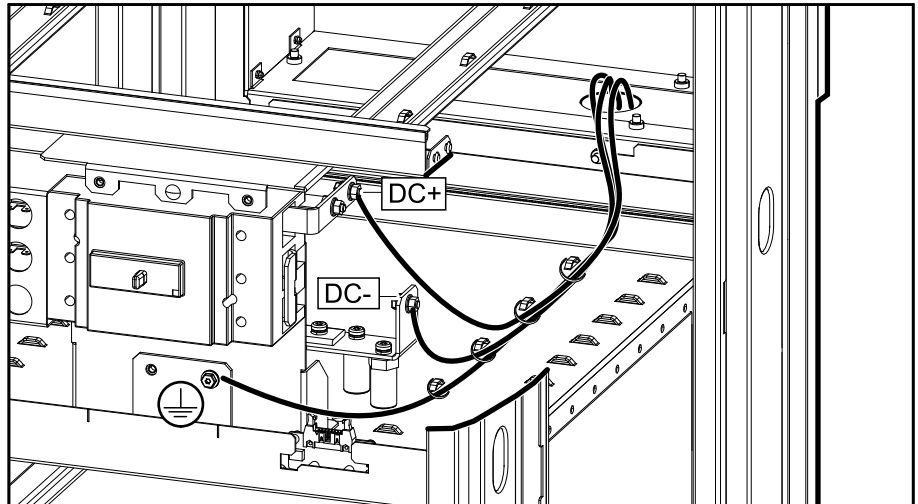
### Top View of the Modular Battery Cabinet



**3. For remote UPS:**

- a. Connect the PE cable and the DC cables (not provided) in modular battery cabinet 1.
- b. Route the PE and DC cables out through the conduit box and into the UPS power cabling area.
- c. Follow the UPS installation manual to connect the PE and DC cables in the UPS.

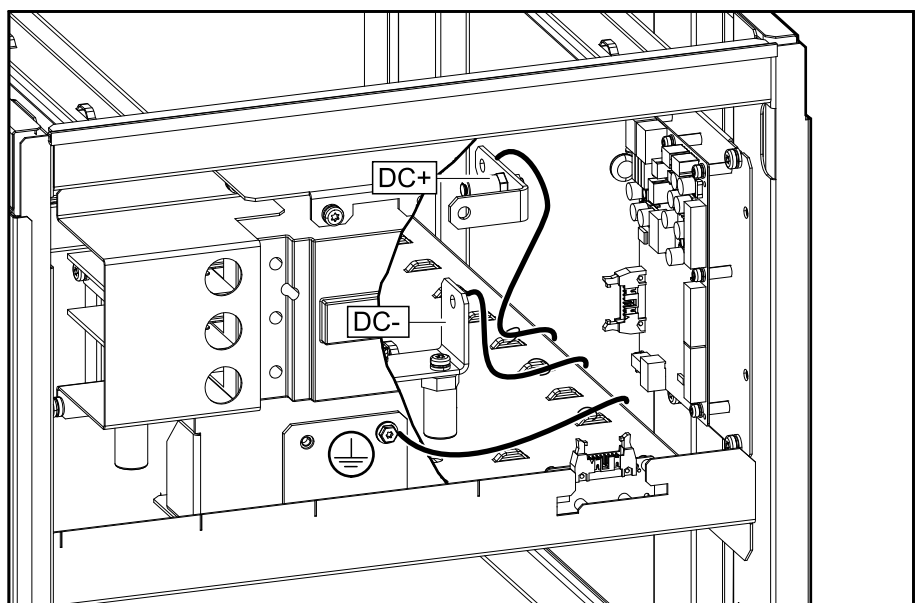
**Front View of Modular Battery Cabinet 1 for Remote UPS**



**4. For adjacent UPS with internal batteries:**

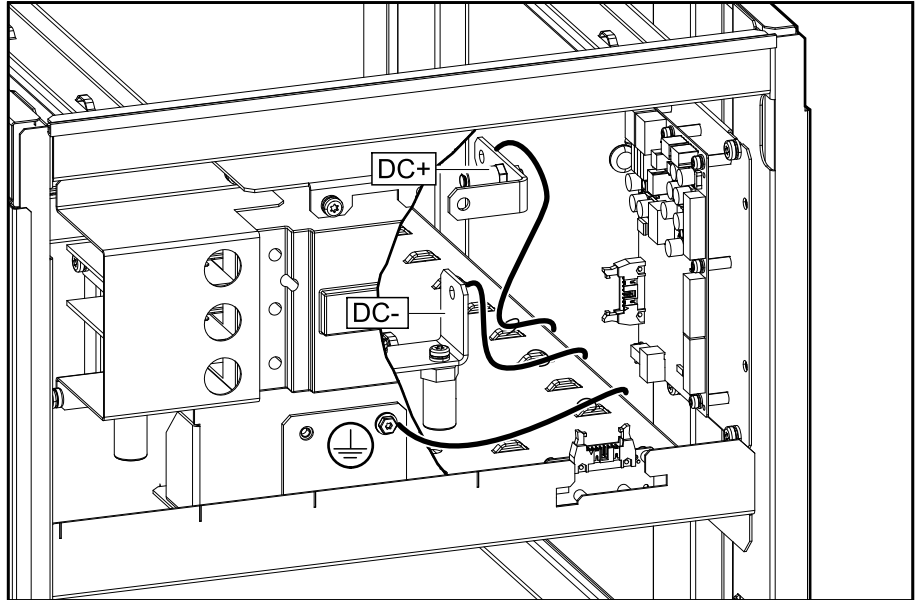
- a. Connect the provided PE cable (0W49449) and DC cables (0W49426) in the UPS. Follow the UPS installation manual to connect and route the PE cable and DC cables in the UPS.
- b. Connect the PE and DC cables in modular battery cabinet 1.

**Front View of Modular Battery Cabinet 1 for Adjacent UPS**



**5. For adjacent UPS for external batteries:**

- a. Connect the PE cable (0W13065) and the DC cables (0W13071) from optional kit GVSOPT030 in modular battery cabinet 1.
- b. Route the PE and DC cables through the right side and into the UPS power cabling area.
- c. Follow the UPS installation manual to connect the PE and DC cables in the UPS.

**Front View of Modular Battery Cabinet 1 for Adjacent UPS**

# Connect the Power Cables for a UPS Rated over 50 kW

## NOTICE

### RISK OF EQUIPMENT DAMAGE

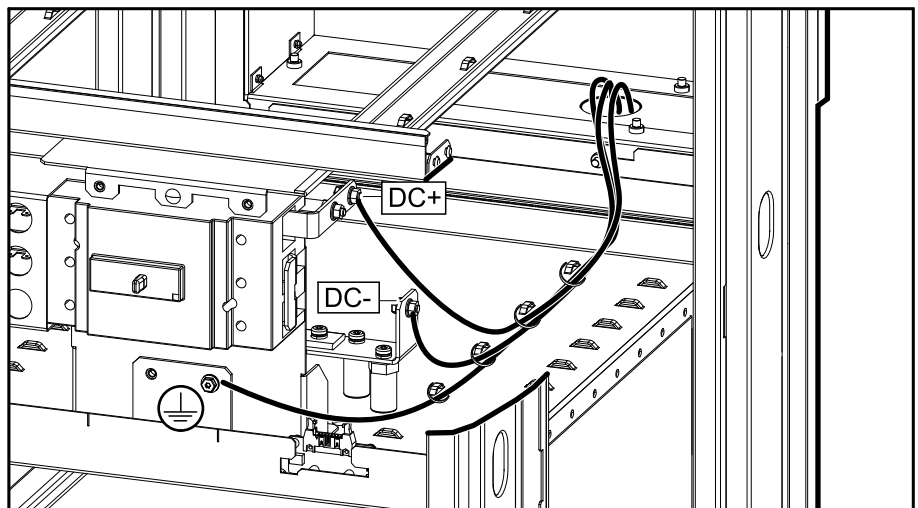
For installations with a UPS rated over 50 kW, the DC cables from each modular battery cabinet must be connected directly in the UPS.

**Failure to follow these instructions can result in equipment damage.**

#### 1. For remote UPS:

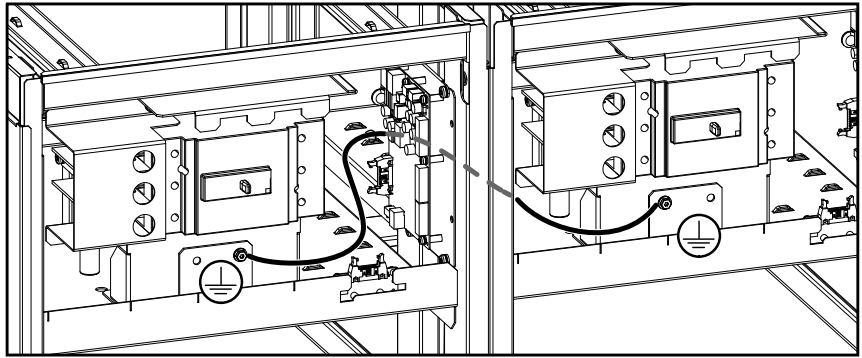
- a. Connect the PE cable and the DC cables (not provided) in each modular battery cabinet
- b. Route the PE and DC cables out through the conduit box and into the UPS power cabling area.
- c. Follow the UPS installation manual to connect the PE and DC cables in the UPS.

#### Front View of the Modular Battery Cabinet for Remote UPS

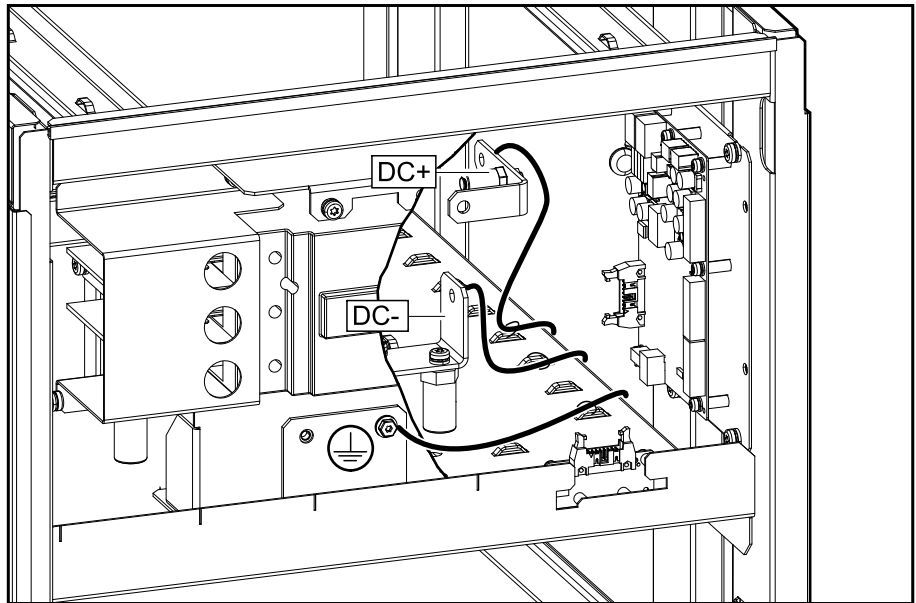


**2. For adjacent UPS for external batteries:**

- a. Connect the provided PE cable (0W49449) between the modular battery cabinets as shown.

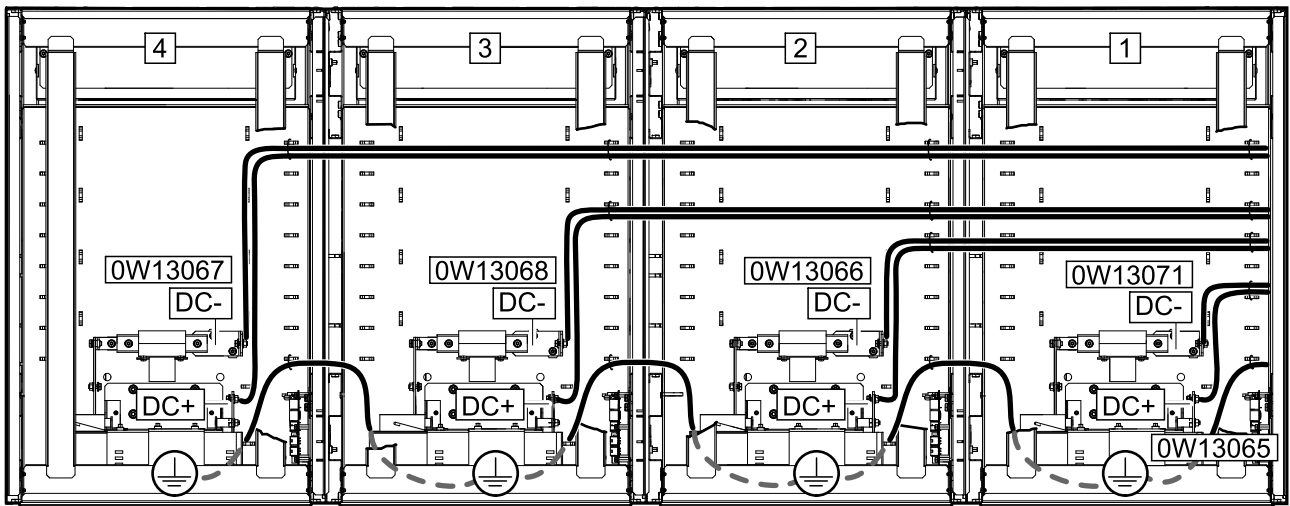
**Front View of Two Modular Battery Cabinets**

- b. Connect the PE cable from optional kit GVSOPT030 in modular battery cabinet 1 and route the PE cable through the right side and into the UPS power cabling area.
- c. Connect the DC cables from optional kit GVSOPT030 in each modular battery cabinet and route the DC cables through the right side and into the UPS power cabling area. The DC cables are routed through the modular battery cabinets.
- d. Follow the UPS installation manual to connect the PE and DC cables in the UPS.

**Front View of Modular Battery Cabinet 1**



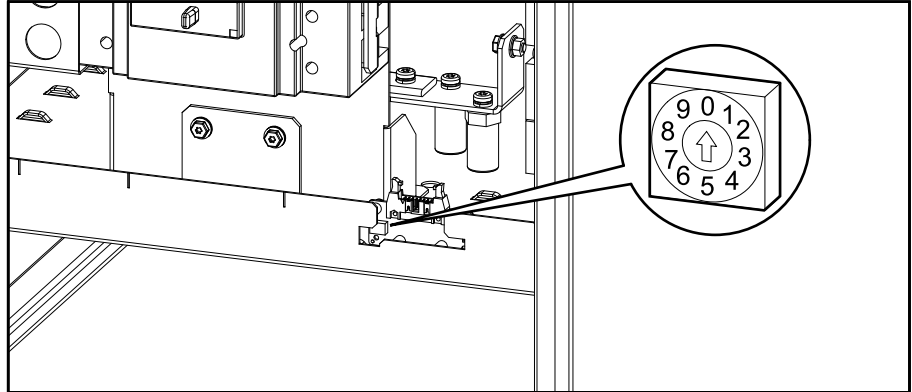
**Top View of the Modular Battery Cabinets**



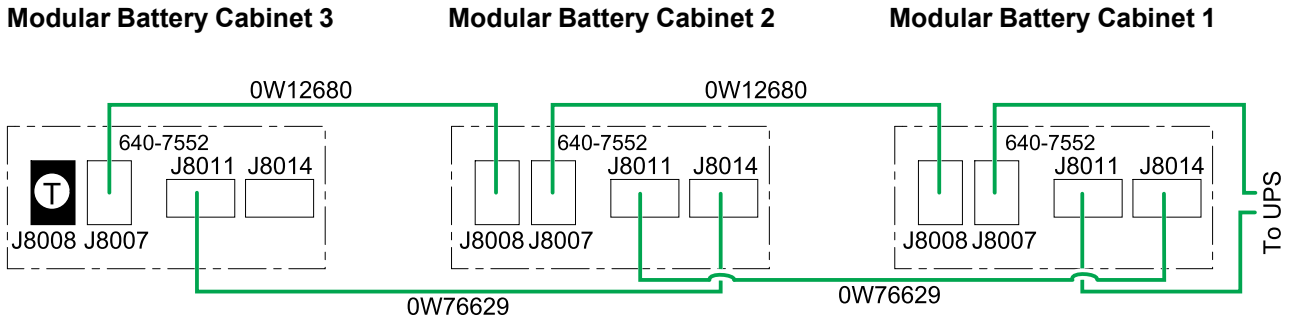
## Connect the Signal Cables

1. Assign an ID to each modular battery cabinet with the switch below the battery breaker. Set the IDs according to the installation overview images in *Installation Procedure*, page 17.

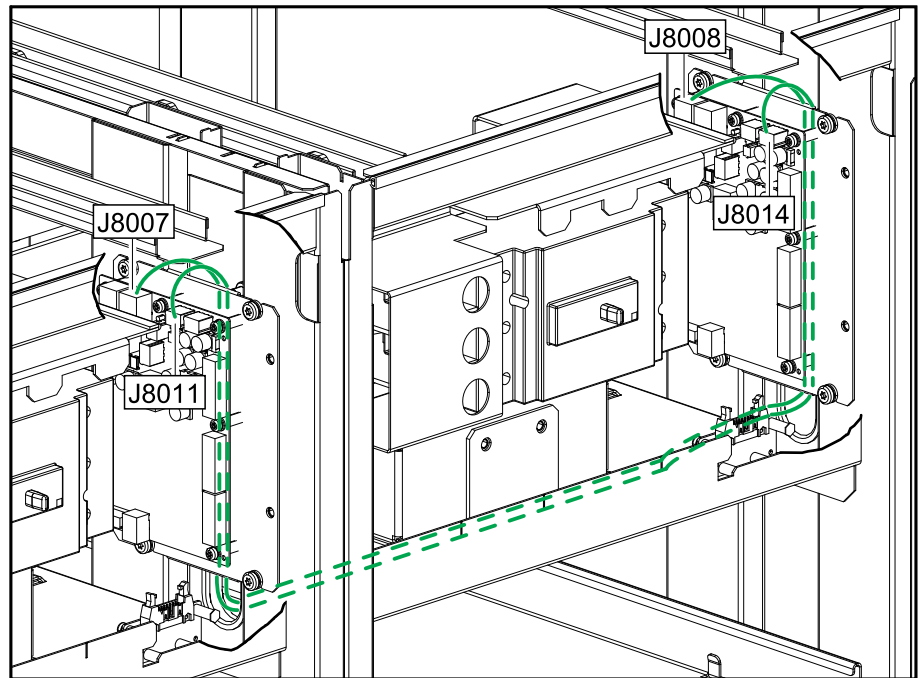
### Front View of the Modular Battery Cabinet



2. Connect the provided signal cables between all the modular battery cabinets:
  - a. Connect the provided signal cable 0W12680 from J8007 to J8008 on board 640-7552 between the modular battery cabinets.
  - b. Connect the provided signal cable 0W76629 from J8011 to J8014 on board 640-7552 between the modular battery cabinets.
  - c. Mount a termination plug (T) in the unused J8008 connector in the last modular battery cabinet.



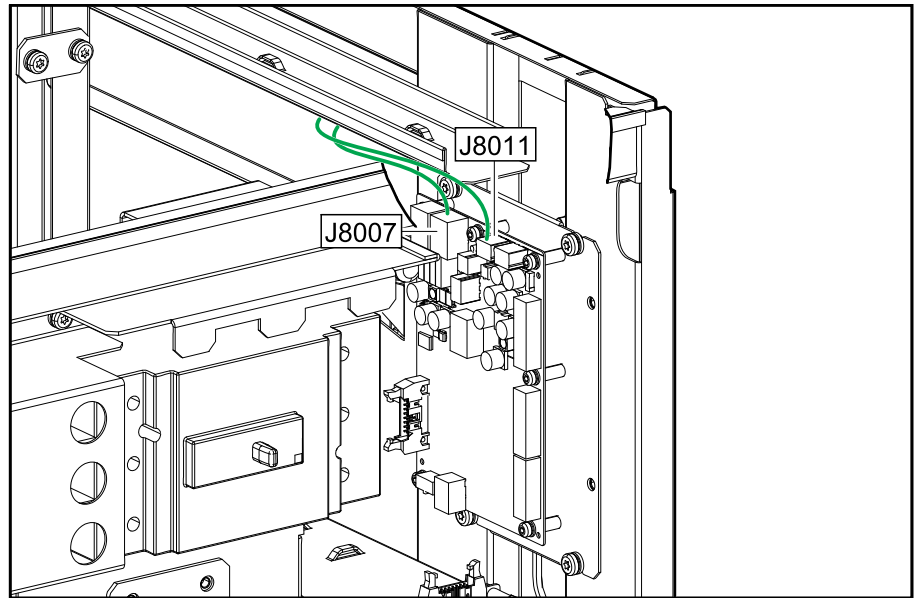
Front View of Two Modular Battery Cabinets



3. For installation with adjacent UPS with internal batteries:
  - a. Connect the signal cable 0W12680 to J8007 on board 640-7552 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 0W76629 to J8011 on board 640-7552 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 adjacent UPS for external batteries:**

- a. Connect the signal cable 0W13070 from optional kit GVSOPT030 to J8007 on board 640-7552 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 signal cable 0W13069 from optional kit GVSOPT030 to J8011 on board 640-7552 in modular battery cabinet 1, route through the right side, and follow the UPS installation manual to connect the signal cables in the UPS.

**Front View of Modular Battery Cabinet 1 for Adjacent UPS**

**5. For remote installation:**

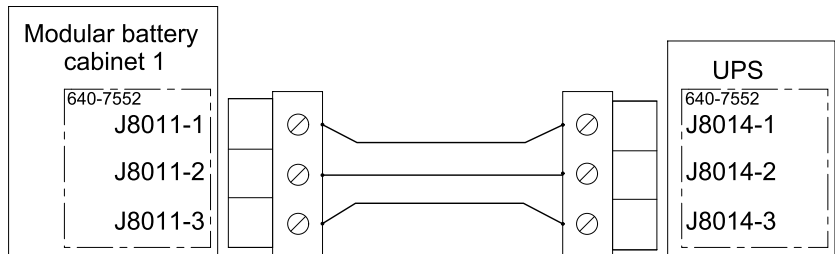
- a. Connect signal cables to J8007 on board 640-7552 in modular battery cabinet 1, route through the rear, and follow the UPS installation manual to connect the signal cables in the UPS.

**NOTE:** The provided signal cable 0W12680 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.

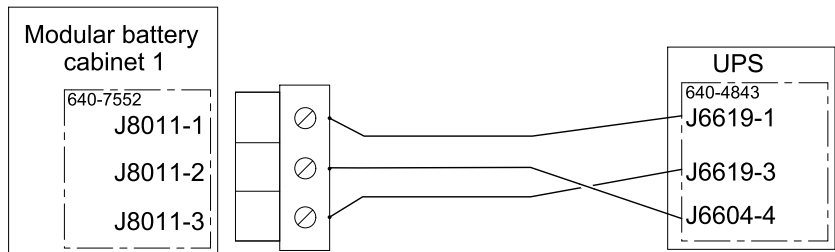
- b. Connect signal cables to J8011 on board 640-7552 in modular battery cabinet 1, route through the rear, and follow the UPS installation manual to connect the signal cables in the UPS.

**NOTE:** The provided signal cable 0W76629 is not long enough for a remote UPS installation. Reuse the connectors from the provided signal cable 0W76629 to make new signal cables in the correct length. This signal cable is classified as non-Class 2/non-SELV.

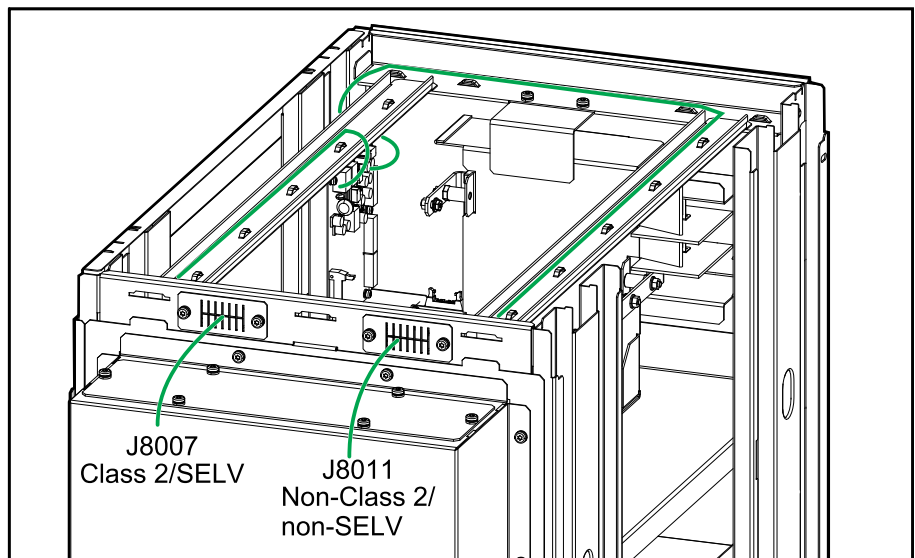
**Signal Cable for UPS with Internal Batteries**



**Signal Cable for UPS for External Batteries**



**Rear View of Modular Battery Cabinet 1 for 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

## **⚠️⚠️ 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.**

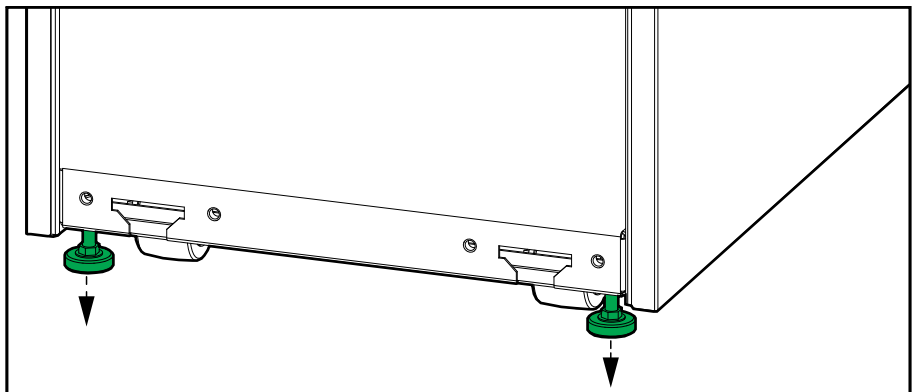
## **⚠️ WARNING**

### **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. 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**

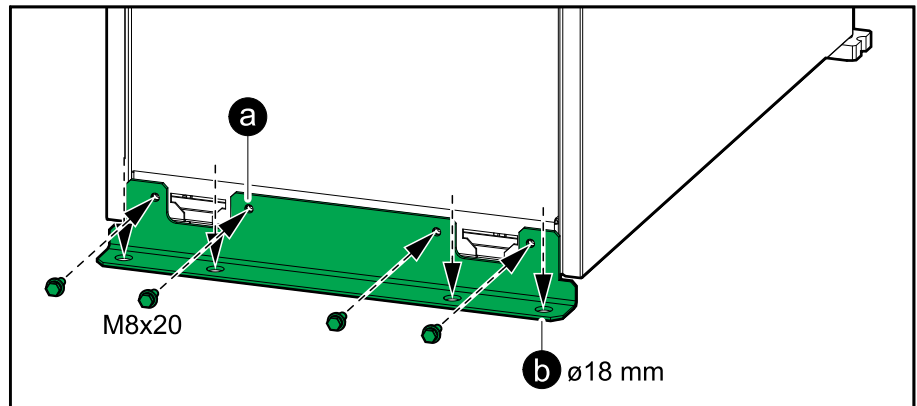
### **RISK OF EQUIPMENT DAMAGE**

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

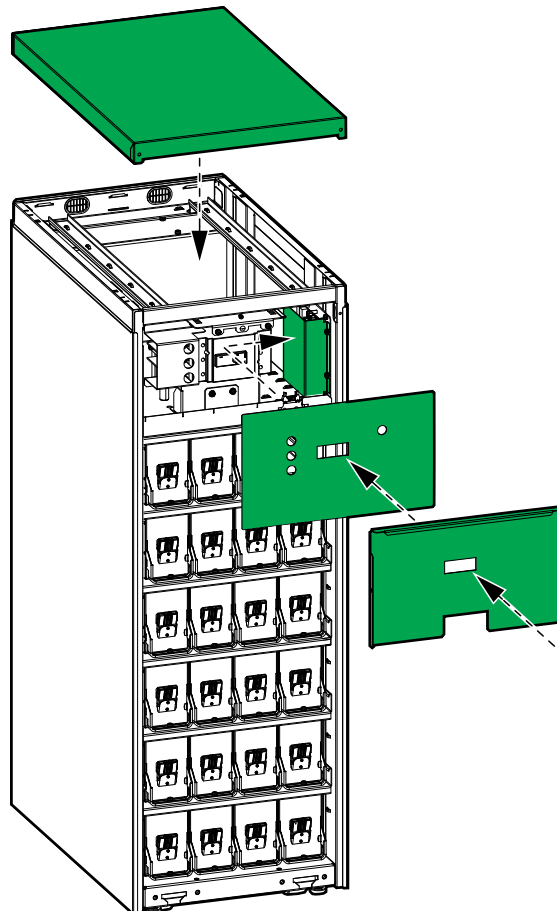
**Failure to follow these instructions can result in equipment damage.**

## 2. Only for seismic anchoring:

- a. Install the seismic front anchoring bracket on the modular battery cabinet with the provided M8 bolts.
- b. Mount the seismic front anchoring bracket on the modular battery cabinet to the floor. Use appropriate hardware for the floor type – the hole diameter in the front anchoring bracket is  $\varnothing 18$  mm.



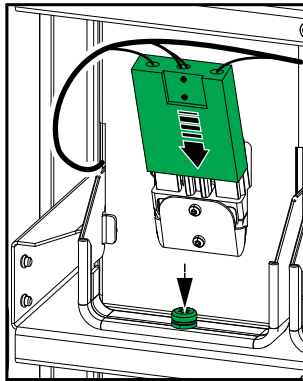
3. Set the battery breaker BB to the open (OFF) position.
4. Push the battery modules into the slots. Fill the shelves from the bottom and upwards.
5. Turn down the battery module handle and fasten the handle to the shelf with the provided screw.
6. Reinstall the indicated plates and covers.



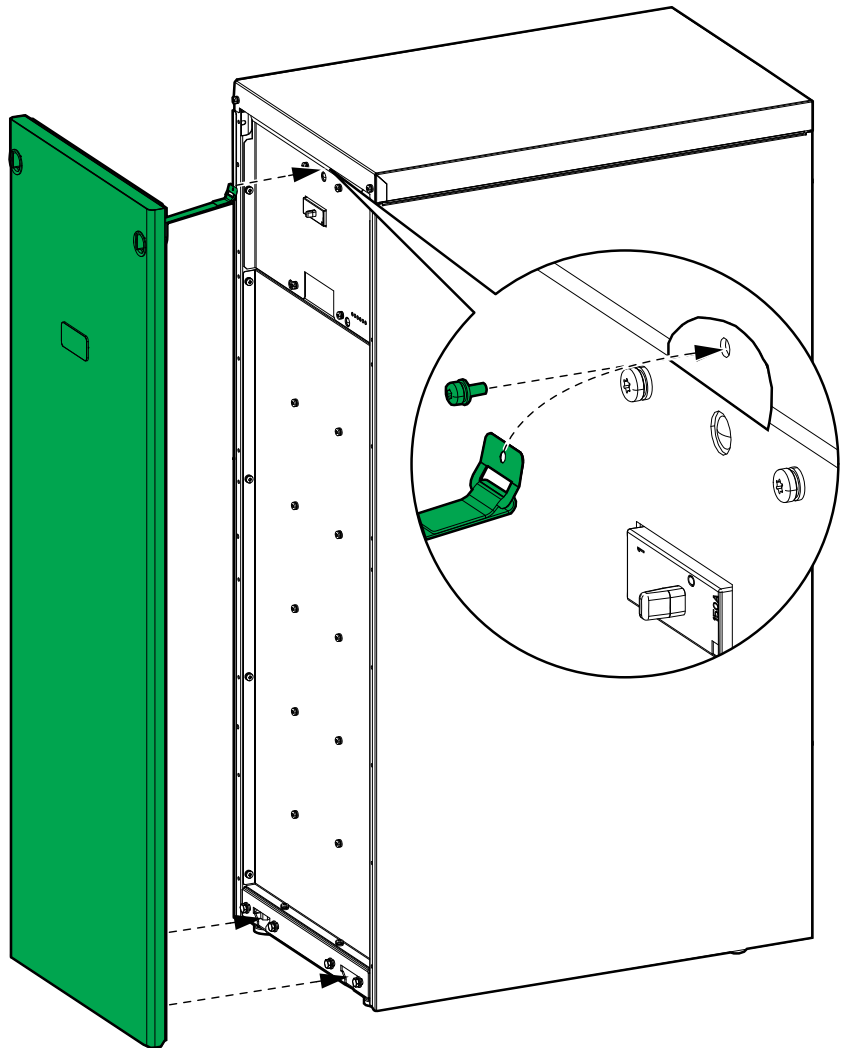


7. Connect the battery terminals to the front of the battery modules.

### Front View of Battery Module



8. Reinstall the battery cover.
9. Reinstall the front panel.
  - a. Insert the two tabs in the bottom of the front panel in the modular battery cabinet at a tilted angle.
  - b. Reconnect the front panel strap to the modular battery cabinet.
  - c. Close the front panel and lock with the two locking knobs.







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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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