

# Empty Battery Cabinet, 700 mm Wide

## Installation

GVEBC7

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

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

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# Table of Contents

Important Safety Instructions — SAVE THESE	
INSTRUCTIONS .....	5
Safety Precautions .....	6
Additional Safety Precautions After Installation.....	7
Electrical Safety.....	8
Battery Safety.....	9
Specifications .....	10
Battery Requirements .....	10
Empty Battery Cabinet Weight and Dimensions .....	10
Environment.....	10
Installation Procedure .....	11
Position the Empty Battery Cabinet.....	11
Prepare the Empty Battery Cabinet for Cables – Bottom Cable Entry.....	13
Prepare the Empty Battery Cabinet for Cables – Top Cable Entry .....	14
Install and Connect the Batteries .....	17
Add Translated Safety Labels to Your Product .....	17
Final Installation .....	18



# 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**

**⚠ 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 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.**

**⚠ DANGER**

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

In systems where backfeed protection is not part of the standard design, an automatic isolation device (backfeed protection option or other device meeting the requirements of IEC/EN 62040–1 or UL1778 5th Edition – depending on which of the two standards apply to your local area) must be installed to prevent hazardous voltage or energy at the input terminals of the isolation device. The device must open within 15 seconds after the upstream power supply fails and must be rated according to the specifications.

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

When the UPS input is connected through external isolators that, when opened, isolate the neutral or when the automatic backfeed isolation is provided external to the equipment or is connected to an IT power distribution system, a label must be fitted at the UPS input terminals, and on all primary power isolators installed remote from the UPS area and on external access points between such isolators and the UPS, by the user, displaying the following text (or equivalent in a language which is acceptable in the country in which the UPS system is installed):

**⚠ 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.**

## 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. Refer to the label in the classic battery cabinet for information on batteries in your system.

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

### **⚠ CAUTION**

#### **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, we recommend 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 injury or equipment damage.**

# 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.**

## Battery Requirements

Battery type	VRLA
Minimum flammability rating	HB
Battery shelves	4 shelves sized 657 x 767 mm
Maximum weight per shelf	300 kg
Maximum weight per cabinet	1200 kg
Height between battery shelves	340 mm
Maximum battery height including battery terminals	240 mm

## Empty Battery Cabinet Weight and Dimensions

	Weight kg	Height mm	Width mm	Depth mm
Empty battery cabinet	190	1970	700	850

## Environment

	Operation	Storage
Temperature	0 °C to 40 °C (32 °F to 104 °F)	-25 °C to 55 °C (-13 °F to 131 °F)

# Installation Procedure

1. *Position the Empty Battery Cabinet, page 11.*
2. Prepare the empty battery cabinet for cables. Follow one of the procedures:
  - *Prepare the Empty Battery Cabinet for Cables – Bottom Cable Entry, page 13, or*
  - *Prepare the Empty Battery Cabinet for Cables – Top Cable Entry, page 14.*
3. Install the battery breaker kit. Follow the manual supplied with the battery breaker kit.
4. *Install and Connect the Batteries, page 17.*
5. *Add Translated Safety Labels to Your Product, page 17.*
6. *Final Installation, page 18.*

## Position the Empty Battery Cabinet

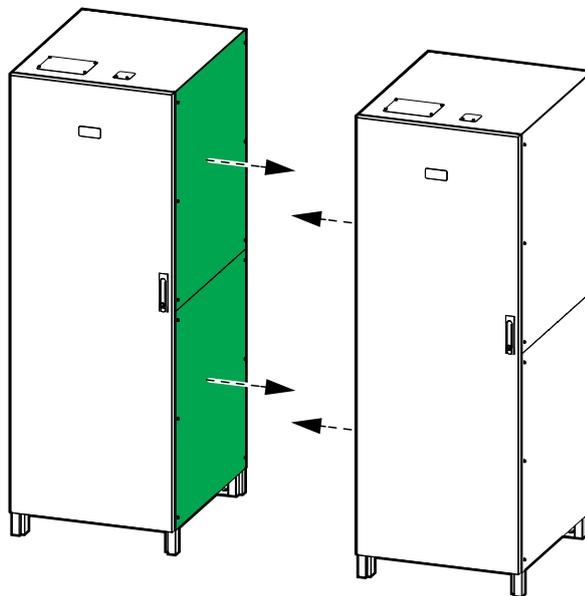
### **⚠ DANGER**

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

Leave the empty battery cabinet covered while making anchoring holes to prevent dust or other conductive parts in the system.

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

1. **Only for installation with two empty battery cabinets:** Remove the indicated side panels from the battery cabinets on the adjacent sides.



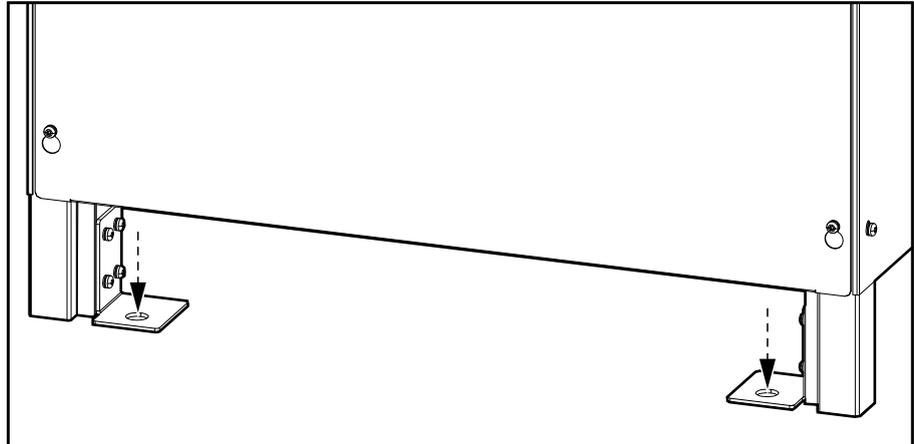
2. Position the empty battery cabinet(s) in the final installation area.

**NOTE:** Leave 100 mm free space behind the empty battery cabinet(s) for airflow.

- Anchor the rear anchoring brackets to the floor.

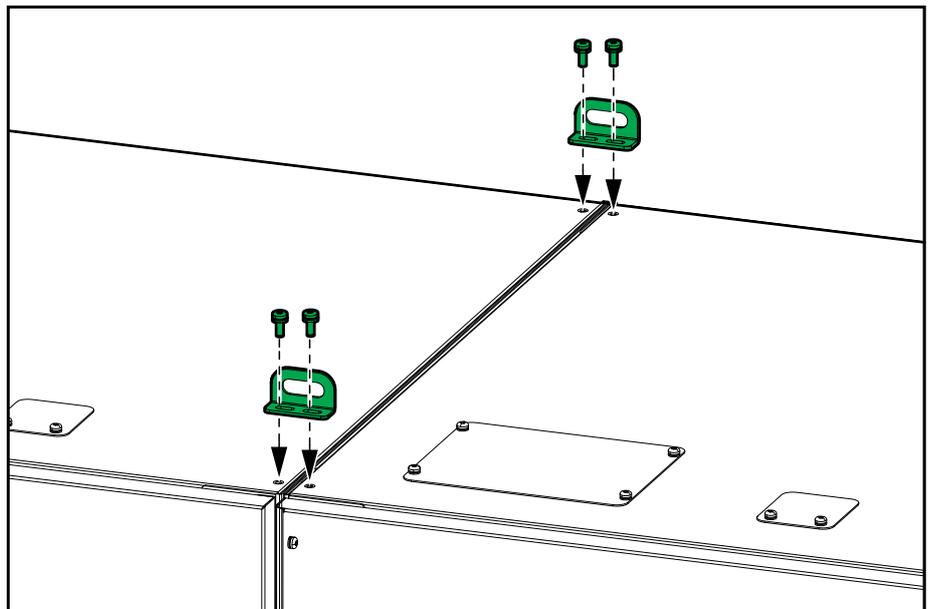
**NOTE:** Floor anchoring bolts are not provided.

#### Rear View of the Empty Battery Cabinet



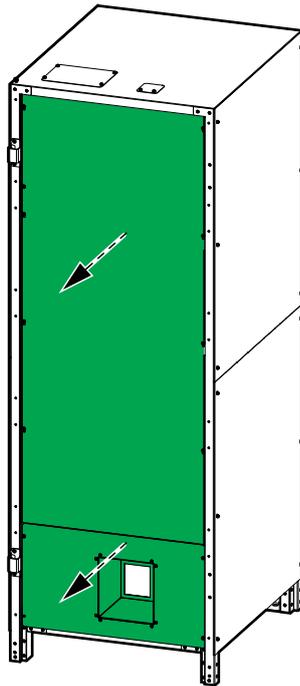
- Only for installation with two empty battery cabinets:** Install the top baying brackets between the empty battery cabinets.

#### Front View of Two Empty Battery Cabinets



5. Remove the two front covers.

### Front View of the Empty Battery Cabinet



## Prepare the Empty Battery Cabinet for Cables – Bottom Cable Entry

### **⚠ DANGER**

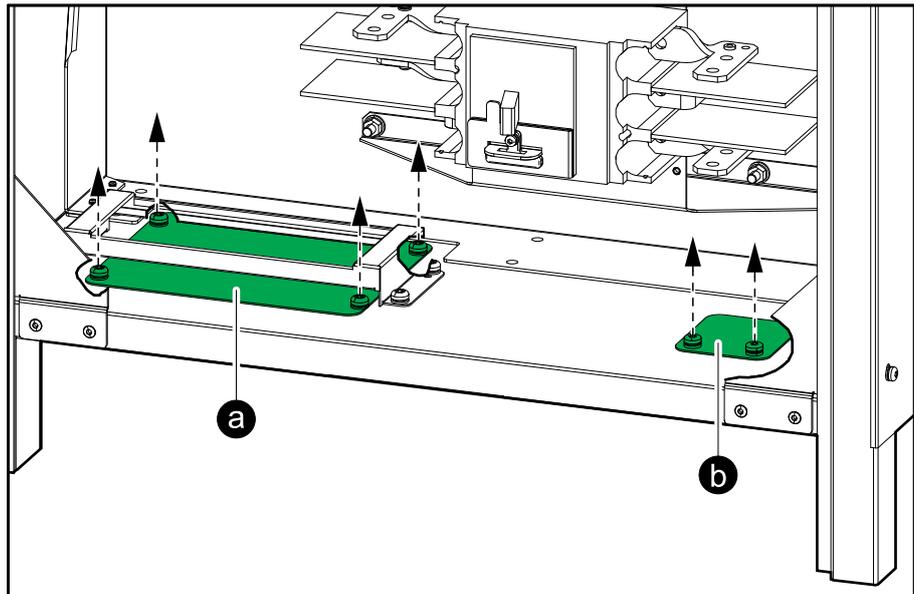
#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

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 gland plates for (a) power cables and (b) signal cables.

### Front View of the Empty Battery Cabinet



2. Drill or punch holes for power cables and signal cables in the gland plates.
3. Reinstall the gland plates.

### **⚠ DANGER**

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

Ensure that there are no sharp edges that can damage the cables.

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

## Prepare the Empty Battery Cabinet for Cables – Top Cable Entry

### **⚠ DANGER**

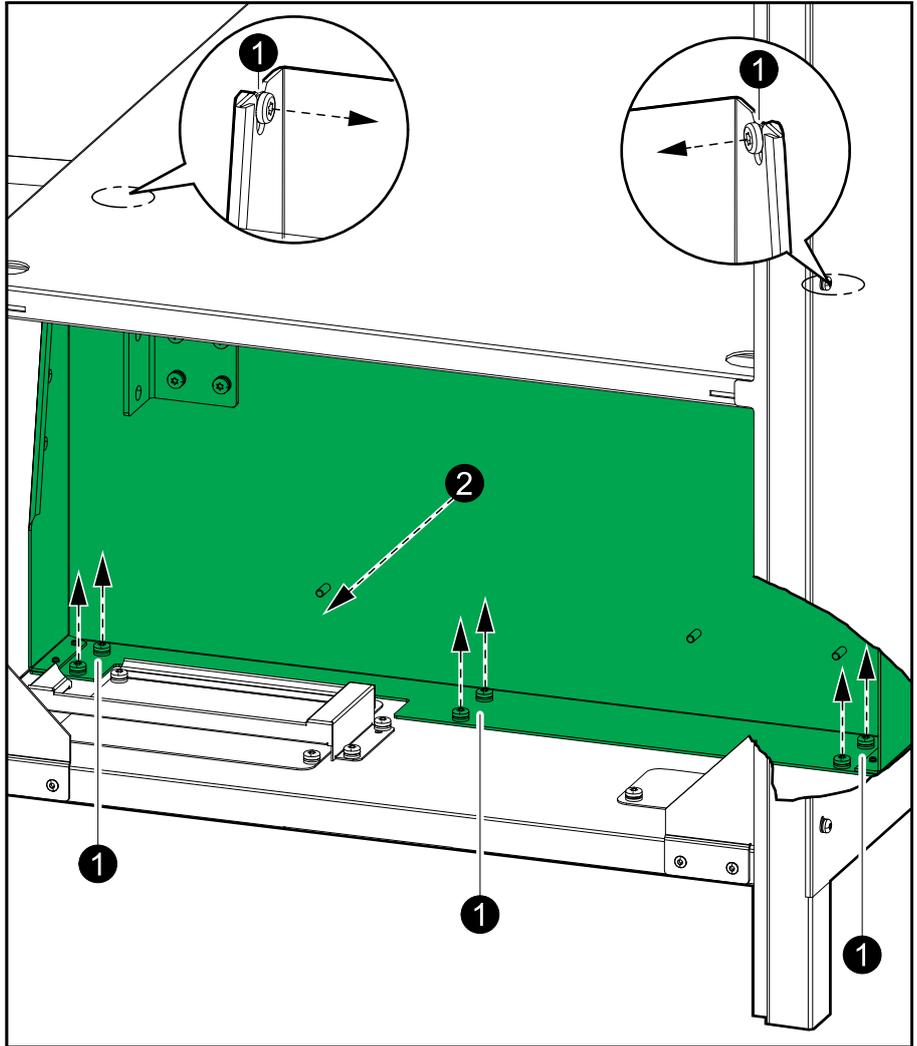
#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

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 eight screws holding the battery breaker plate. Save the screws for later use.

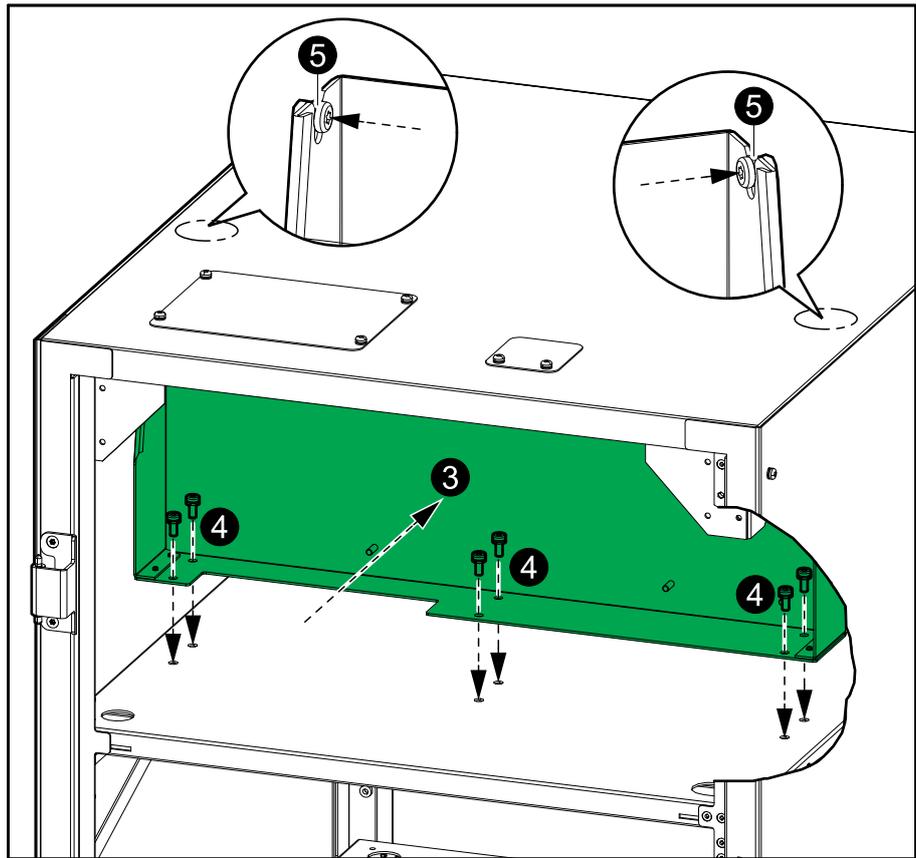
**Front View of the Empty Battery Cabinet**



2. Remove the battery breaker plate.

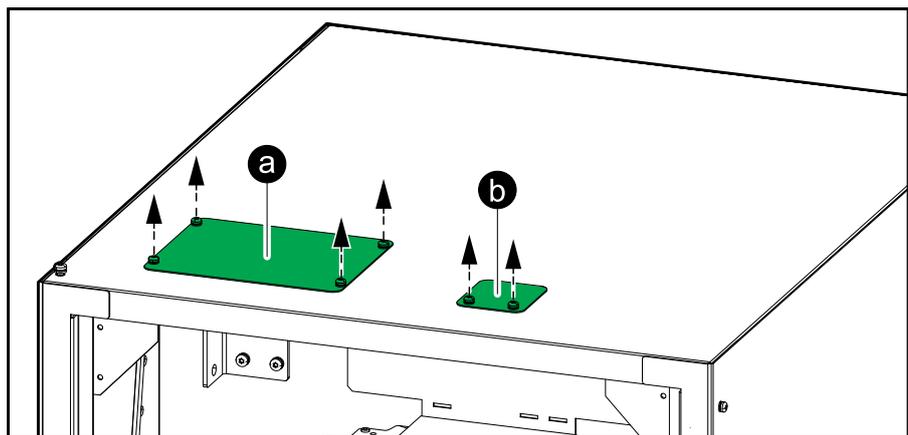
3. Place the battery breaker plate on the top shelf of the empty battery cabinet.

#### Front View of the Empty Battery Cabinet



4. Fasten the bottom part of the battery breaker plate with six screws.
5. Fasten the sides of the battery breaker plate with two screws.
6. Remove the gland plates for (a) power cables and (b) signal cables.

#### Front View of the Empty Battery Cabinet



7. Drill or punch holes for power cables and signal cables in the gland plates.

8. Reinstall the gland plates.

<b>⚠ DANGER</b>
<b>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH</b>
Ensure that there are no sharp edges that can damage the cables.
<b>Failure to follow these instructions will result in death or serious injury.</b>

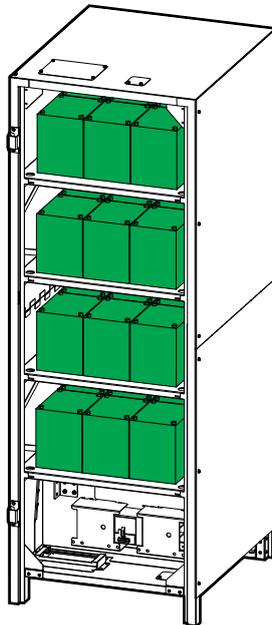
## Install and Connect the Batteries

<b>⚠ WARNING</b>
<b>UNEXPECTED EQUIPMENT HANDLING</b>
The battery cabinet must not be moved after the batteries have been installed.
<b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b>

1. Place the batteries on the shelves in the empty battery cabinet and interconnect the batteries.

**NOTE:** Do not cover the holes in the shelf corners that are intended for cable routing between the shelves.

**Front View of the Empty Battery Cabinet**



2. Note down the battery configuration on the label in the empty battery cabinet.

## Add Translated Safety Labels to Your Product

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

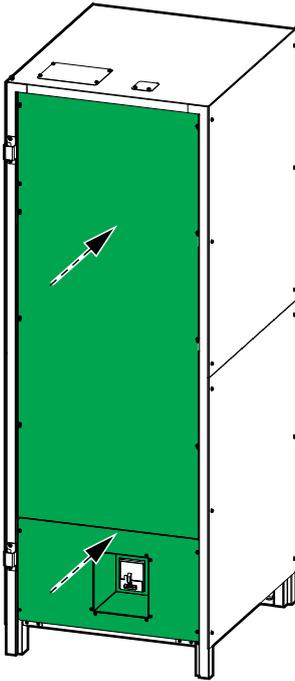
1. Locate the 885-XXXX part number on each safety label on your product.

2. Find the matching sheet of replacement safety labels provided with your product — check that the 885–XXXX part numbers match.
3. Add the replacement safety label in your preferred language to your product on top of the existing French safety label.

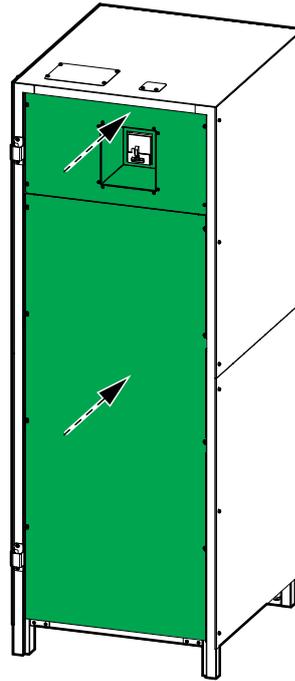
## Final Installation

1. Reinstall the two front covers.

**Bottom Cable Entry System**

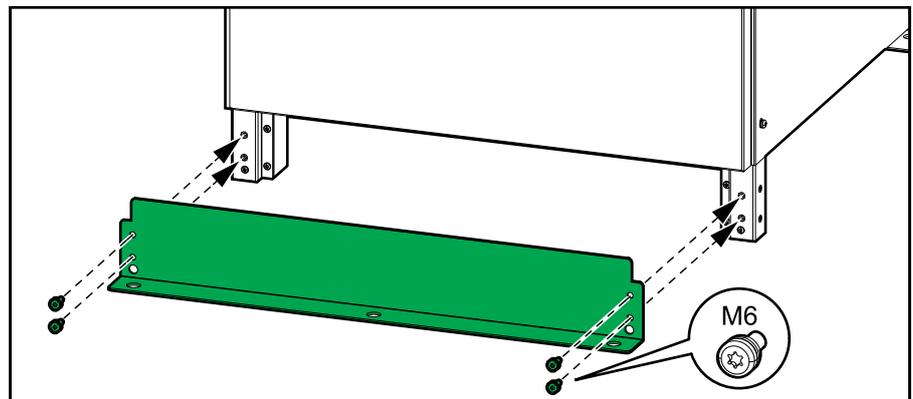


**Top Cable Entry System**



2. Fasten the front anchoring bracket to the empty battery cabinet.

**Front View of Empty Battery Cabinet**



3. Mount the front anchoring bracket to the floor.

**NOTE:** Floor anchoring bolts are not provided.



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