

Galaxy VS

Classic Battery Cabinet

Installation

GVSCBC7A, GVSCBC7B, GVSCBC7C, GVSCBC10A, GVSCBC10B

12/2018



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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.



Go to

https://www.productinfo.schneider-electric.com/portals/ui/galaxyvs_iec/
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.

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.

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

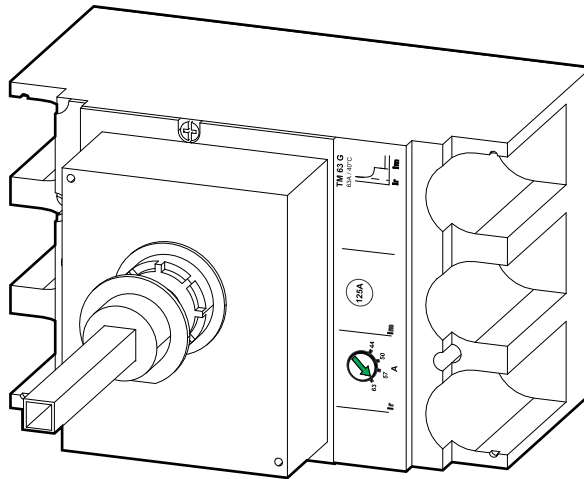
NOTICE
<p>HAZARD OF EQUIPMENT DAMAGE</p> <p>Refer to the UPS installation manual for detailed specifications for the UPS system.</p> <p>Failure to follow these instructions can result in equipment damage.</p>

Classic Battery Cabinet Specifications

⚠ DANGER
<p>HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH</p> <p>The classic battery cabinet must only be used with the Galaxy VS UPS.</p> <p>Failure to follow these instructions will result in death or serious injury.</p>

	Battery type	Number of battery blocks
Classic battery cabinet GVSCBC7A	SWL750	48
Classic battery cabinet GVSCBC7B	SWL1100	44
Classic battery cabinet GVSCBC7C	XP12V1800	36
Classic battery cabinet GVSCBC10A	XP12V1800	48
Classic battery cabinet GVSCBC10B	XP12V13000	40

Trip Settings



Classic Battery Cabinet GVSCBC7A

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX100SDC											
I _r (A)	56			72			80					
I _m (A)	250 (fixed)											

UPS rating	60 kW			80 kW			100 kW					
Power factor	0.8			0.9	1	0.8	0.9	1	0.8	0.9	1	
Breaker	NSX100SDC			N/A								
I _r (A)	80											
I _m (A)	250 (fixed)											

Classic Battery Cabinet GVSCBC7B

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX250SDC											
I _r (A)	140											
I _m (A)	530 (fixed)											

UPS rating	60 kW			80 kW			100 kW					
Power factor	0.8			0.9	1	0.8	0.9	1	0.8	0.9	1	
Breaker	NSX250SDC						N/A					
I _r (A)	160											
I _m (A)	530 (fixed)											

Classic Battery Cabinet GVSCBC7C

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX250SDC											
I _r (A)	175											
I _m (A)	625 (fixed)											

UPS rating	60 kW				80 kW			100 kW			
Power factor	0.8		0.9	1	0.8	0.9	1	0.8	0.9	1	
Breaker	NSX250SDC									N/A	
I _r (A)	200				250						
I _m (A)	625 (fixed)										

Classic Battery Cabinet GVSCBC10A

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX250SDC											
I _r (A)	175											
I _m (A)	625 (fixed)											

UPS rating	60 kW				80 kW			100 kW		
Power factor	0.8		0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX250SDC									
I _r (A)	175				200			225		
I _m (A)	625 (fixed)									

Classic Battery Cabinet GVSCBC10B

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX250SDC											
I _r (A)	175											
I _m (A)	625 (fixed)											

UPS rating	60 kW				80 kW			100 kW		
Power factor	0.8		0.9	1	0.8	0.9	1	0.8	0.9	1
Breaker	NSX250SDC									
I _r (A)	175				225			250		
I _m (A)	625 (fixed)									

Recommended Cable Sizes

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All wiring must comply with all applicable national and/or electrical codes. The maximum allowable battery/PE cable size is 95 mm².

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

Cable sizes in this manual are based on table B.52.3 (52–C2) 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

Protective Earth (PE) cables are sized in accordance with table 54.3 of IEC 60364-4-54, Article 543.

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

Classic Battery Cabinet GVSCBC7A

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	10						16					
Battery PE (mm ²)	10						10					

UPS rating	60 kW			80 kW			100 kW					
Power factor	0.8			0.9	1	0.8	0.9	1	0.8	0.9	1	
Battery +/- (mm ²)	16			N/A								
Battery PE (mm ²)	10											

Classic Battery Cabinet GVSCBC7B

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	35											
Battery PE (mm ²)	16											

UPS rating	60 kW			80 kW			100 kW					
Power factor	0.8			0.9	1	0.8	0.9	1	0.8	0.9	1	
Battery +/- (mm ²)	35						N/A					
Battery PE (mm ²)	16											

Classic Battery Cabinet GVSCBC7C

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	50											
Battery PE (mm ²)	25											

UPS rating	60 kW				80 kW			100 kW		
Power factor	0.8		0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	50				70			N/A		
Battery PE (mm ²)	25				35					

Classic Battery Cabinet GVSCBC10A

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	50											
Battery PE (mm ²)	25											

UPS rating	60 kW				80 kW			100 kW		
Power factor	0.8		0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	50							70		
Battery PE (mm ²)	25							35		

Classic Battery Cabinet GVSCBC10B

UPS rating	20 kW			30 kW			40 kW			50 kW		
Power factor	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	50											
Battery PE (mm ²)	25											

UPS rating	60 kW				80 kW			100 kW		
Power factor	0.8		0.9	1	0.8	0.9	1	0.8	0.9	1
Battery +/- (mm ²)	50				70					
Battery PE (mm ²)	25				35					

Torque Specifications

Bolt size	Torque
M4	1.7 Nm (1.25 lb-ft)
M6	5 Nm (3.69 lb-ft)
M8	17.5 Nm (12.91 lb-ft)
M10	30 Nm (22 lb-ft)

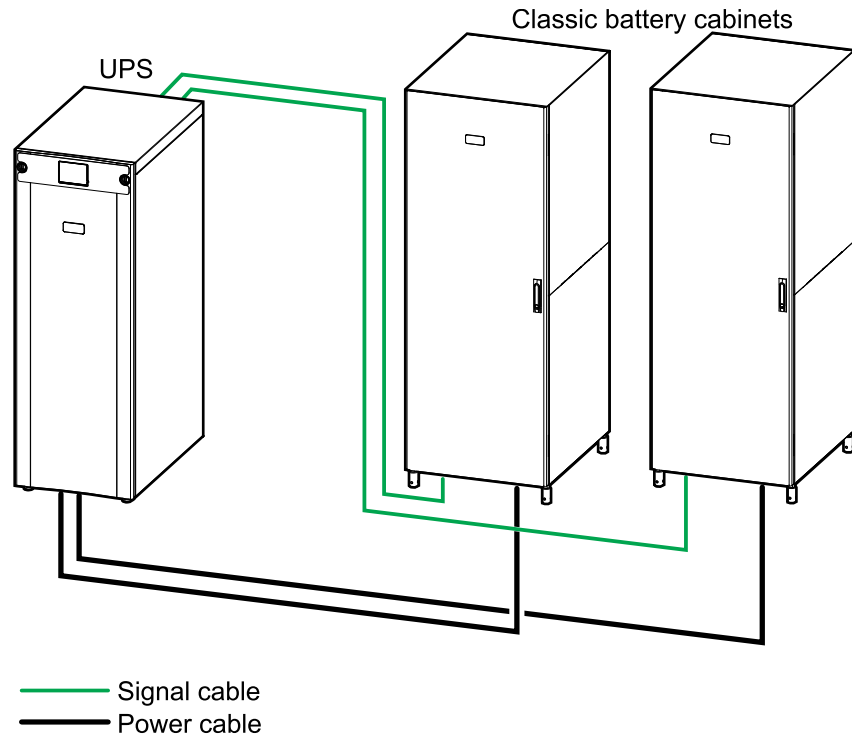
Environment

	Operating	Storage
Temperature	0 °C to 40 °C	-15 °C to 40 °C

Classic Battery Cabinet Weights and Dimensions

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
GVSCBC7A	580	1970	700	830
GVSCBC7B	748	1970	700	830
GVSCBC7C	920	1970	700	830
GVSCBC10A	1280	1970	1000	830
GVSCBC10B	1512	1970	1000	830

Installation Procedure

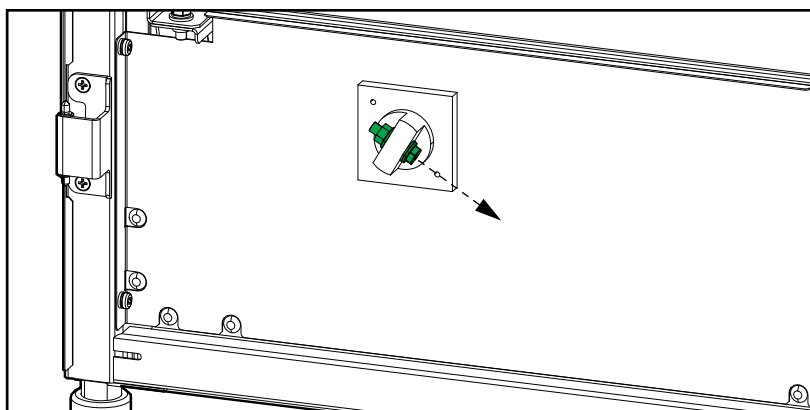


NOTE: The distance between the battery bank and the UPS must not exceed 200 m. Contact Schneider Electric for installations with a longer distance.

1. *Prepare for Cables, page 18.*
2. *Connect the Signal Cables, page 19.*
3. *Connect the Power Cables, page 21.*
4. *Add Translated Safety Labels to Your Product, page 27.*
5. *Final Installation, page 28.*

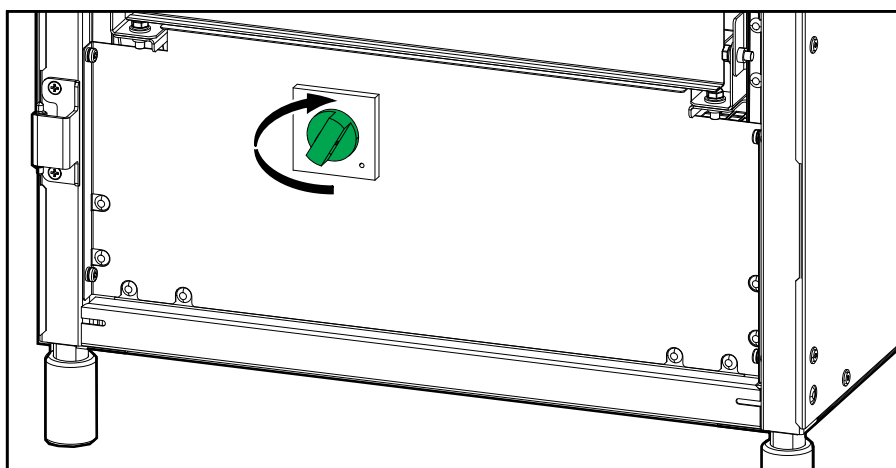
Prepare for Cables

1. Remove the bolt from the battery breaker.



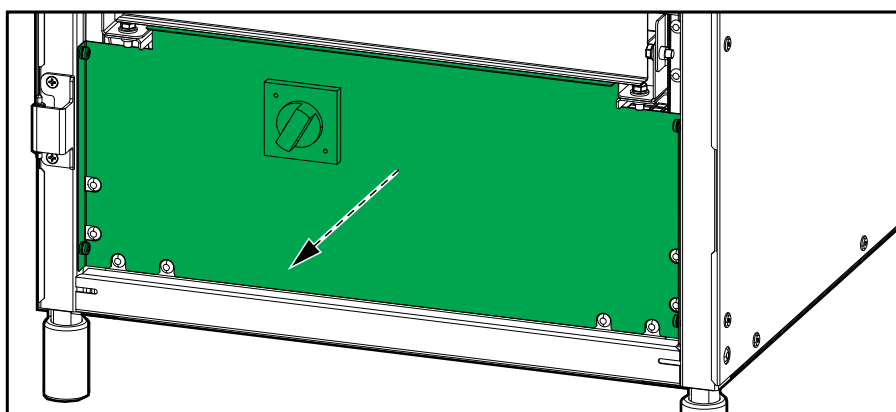
2. Lockout/Tagout the battery breaker in the classic battery cabinet.

Front View of the Classic Battery Cabinet



3. Remove the lower plate including the battery breaker front.

Front View of the Classic Battery Cabinet

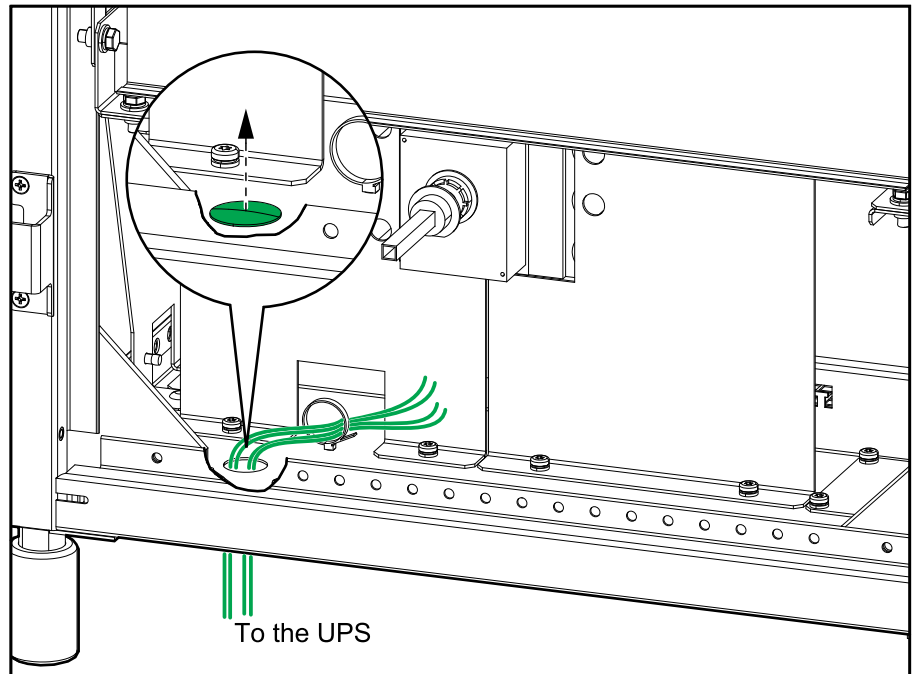


Connect the Signal Cables

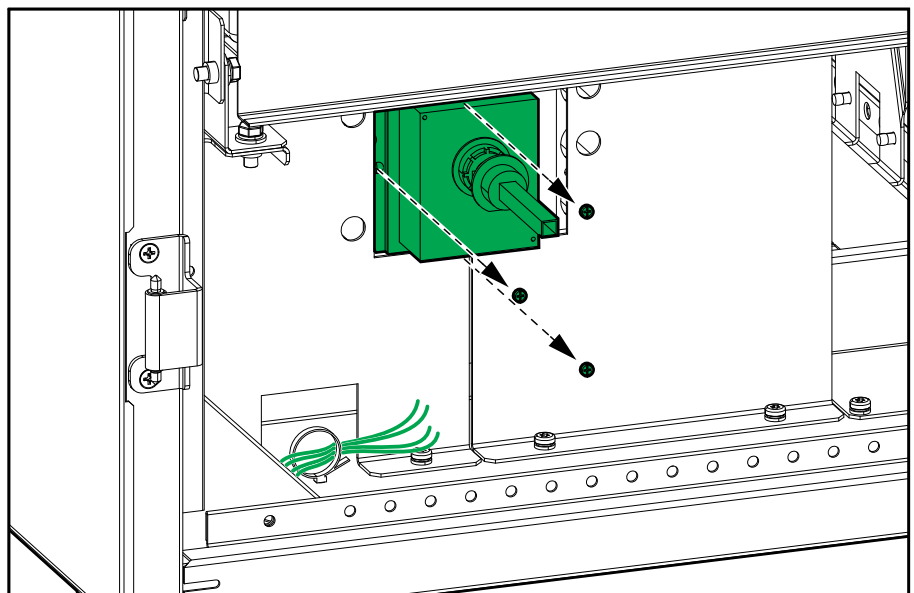
NOTE: Route the signal cables separately from the power cables to ensure sufficient isolation.

1. Remove the plug in the bottom of the classic battery cabinet.

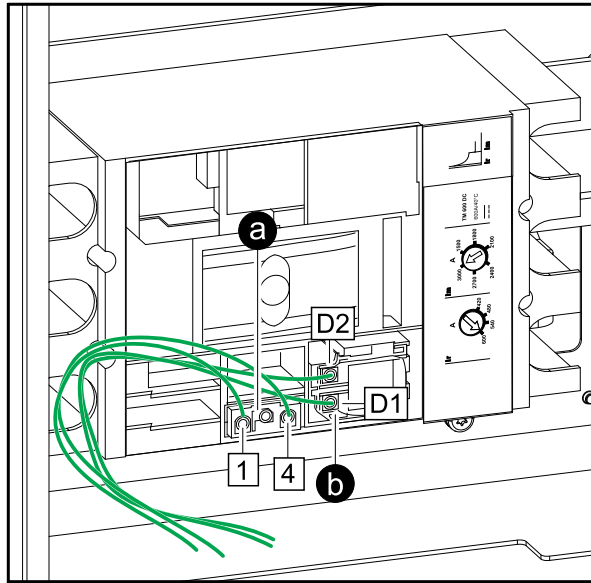
Front View of the Classic Battery Cabinet



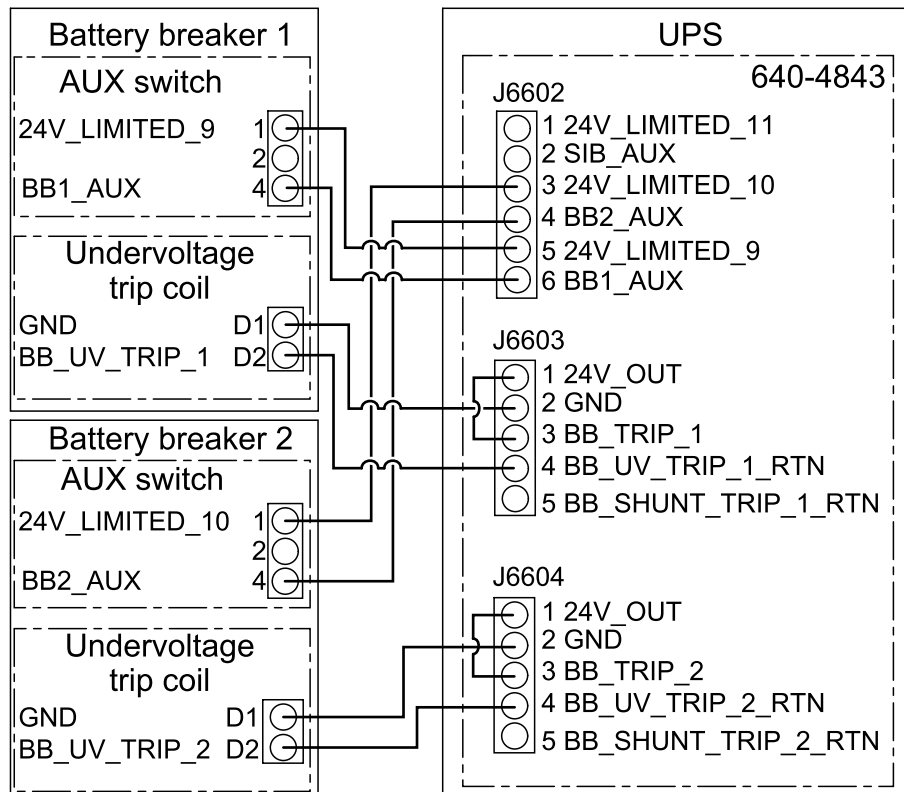
2. Route the signal cables through the bottom of the classic battery cabinet to the battery breaker.
3. Remove the cover on the battery breaker.



4. Connect the signal cables:
 - a. Connect the signal cables to the AUX switch.
 - b. Connect the signal cables to the undervoltage trip coil.



5. Reinstall the cover on the battery breaker.
6. Connect the signal cables in the UPS as shown.



Connect the Power Cables

⚠ DANGER

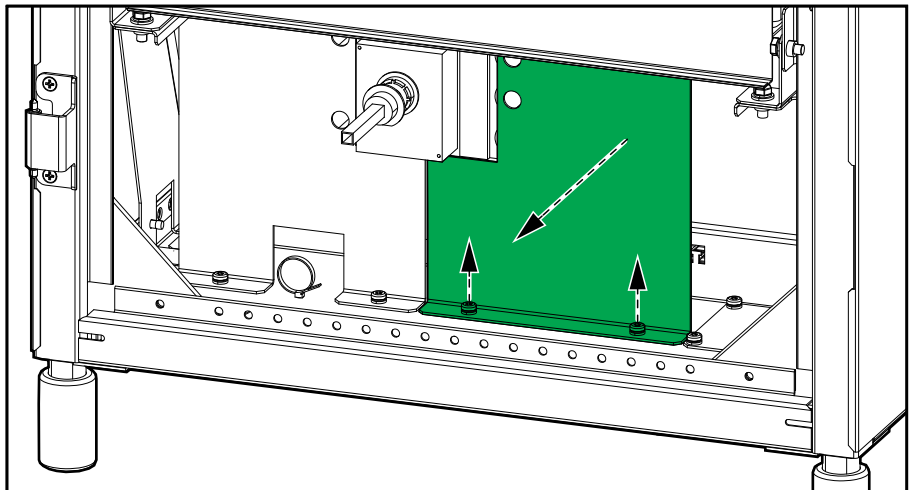
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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.

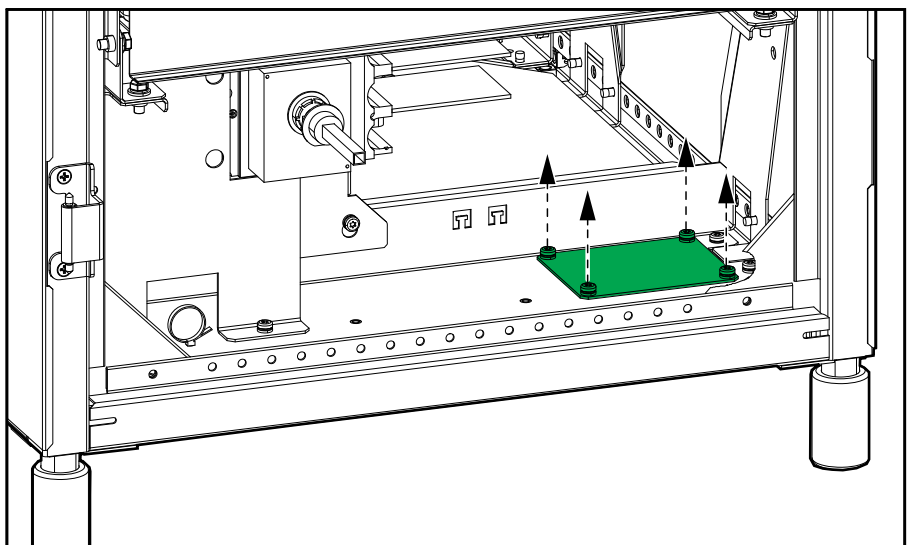
1. Remove the right breaker protection plate.

Front View of the Classic Battery Cabinet



2. Remove the kit with copper bars/cables from the bottom of the classic battery cabinet. Save for later installation.
3. Remove the gland plate.

Front View of the Classic Battery Cabinet



4. Drill or punch holes for power cables in the gland plate.

- Reinstall the gland plate.

⚠ DANGER

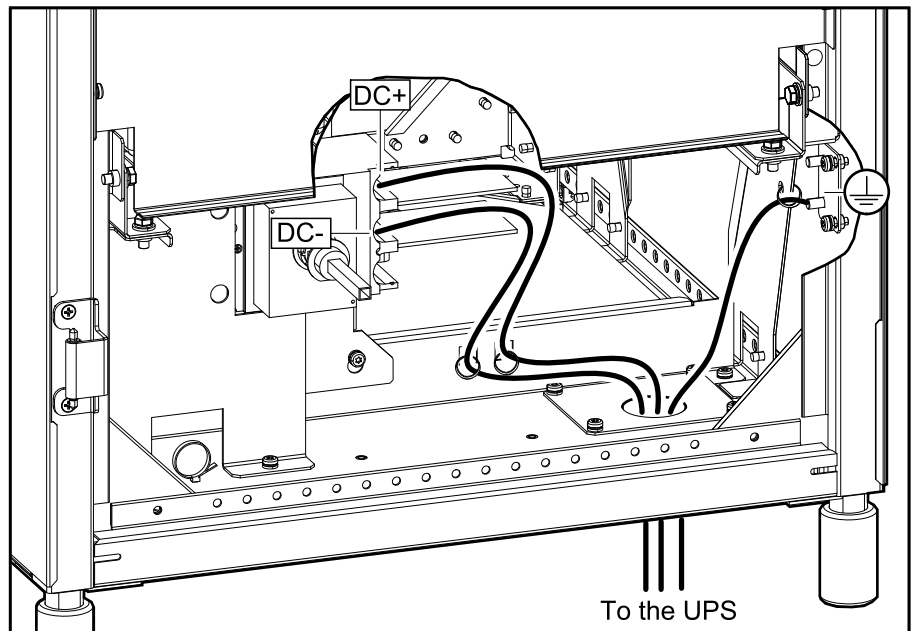
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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

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

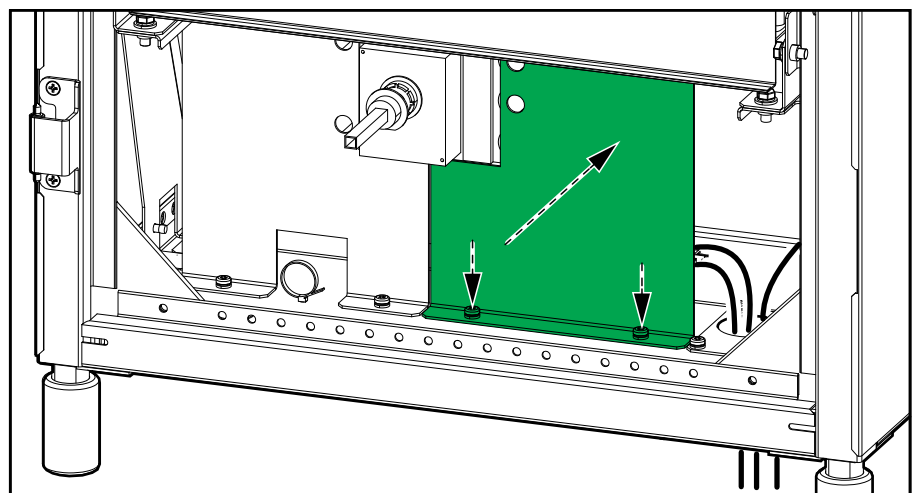
- Route the PE cable through the bottom of the classic battery cabinet and connect the PE cable.
- Route the battery cables through the bottom of the classic battery cabinet and connect the battery cables (DC+, DC-).

Front View of the Classic Battery Cabinet



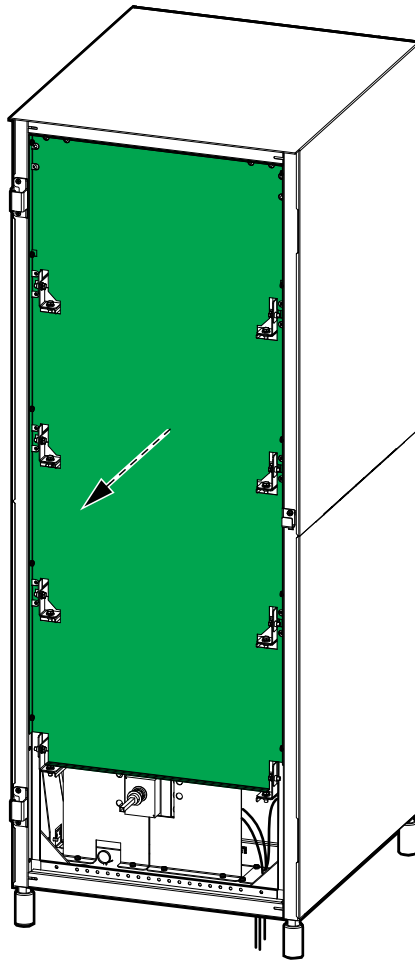
- Reinstall the right breaker protection plate.

Front View of the Classic Battery Cabinet



9. Remove the upper plate.

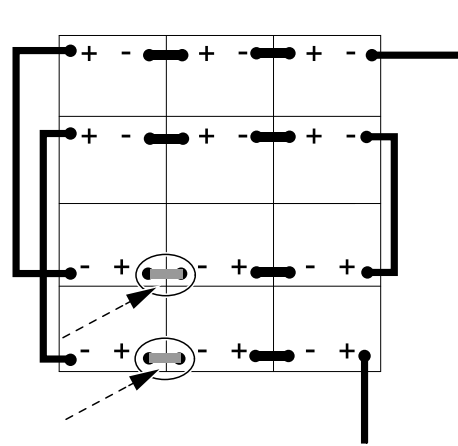
Front View of the Classic Battery Cabinet



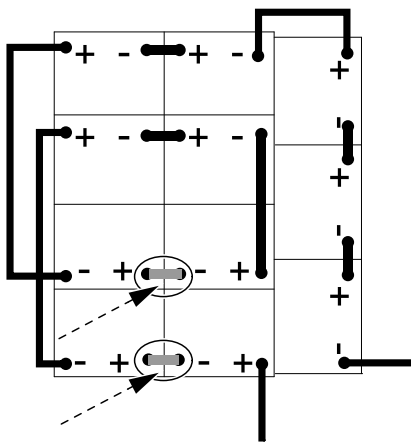
- Interconnect the batteries on each shelf with the provided copper bars or cables as shown. Each shelf is connected the same way. Follow the diagram that matches your classic battery cabinet configuration.

— Preinstalled
— Install on site

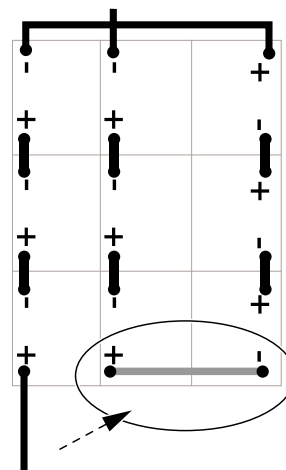
Classic Battery Cabinet GVSCBAT7A



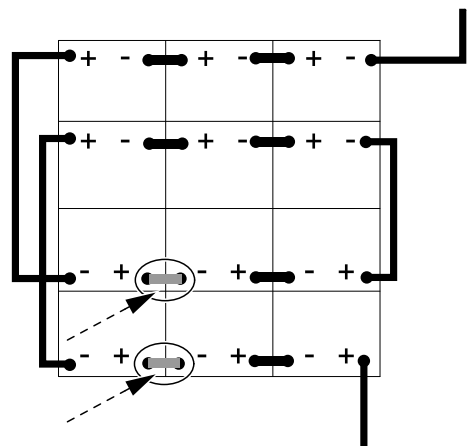
Classic Battery Cabinet GVSCBAT7B



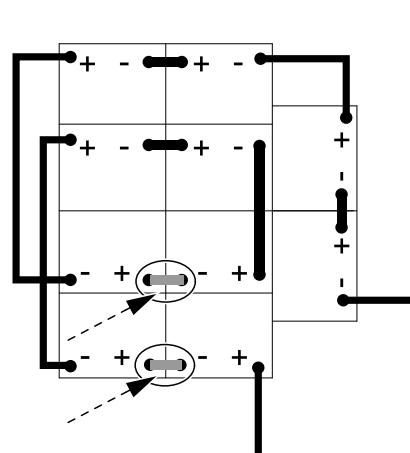
Classic Battery Cabinet GVSCBAT7C



Classic Battery Cabinet GVSCBAT10A

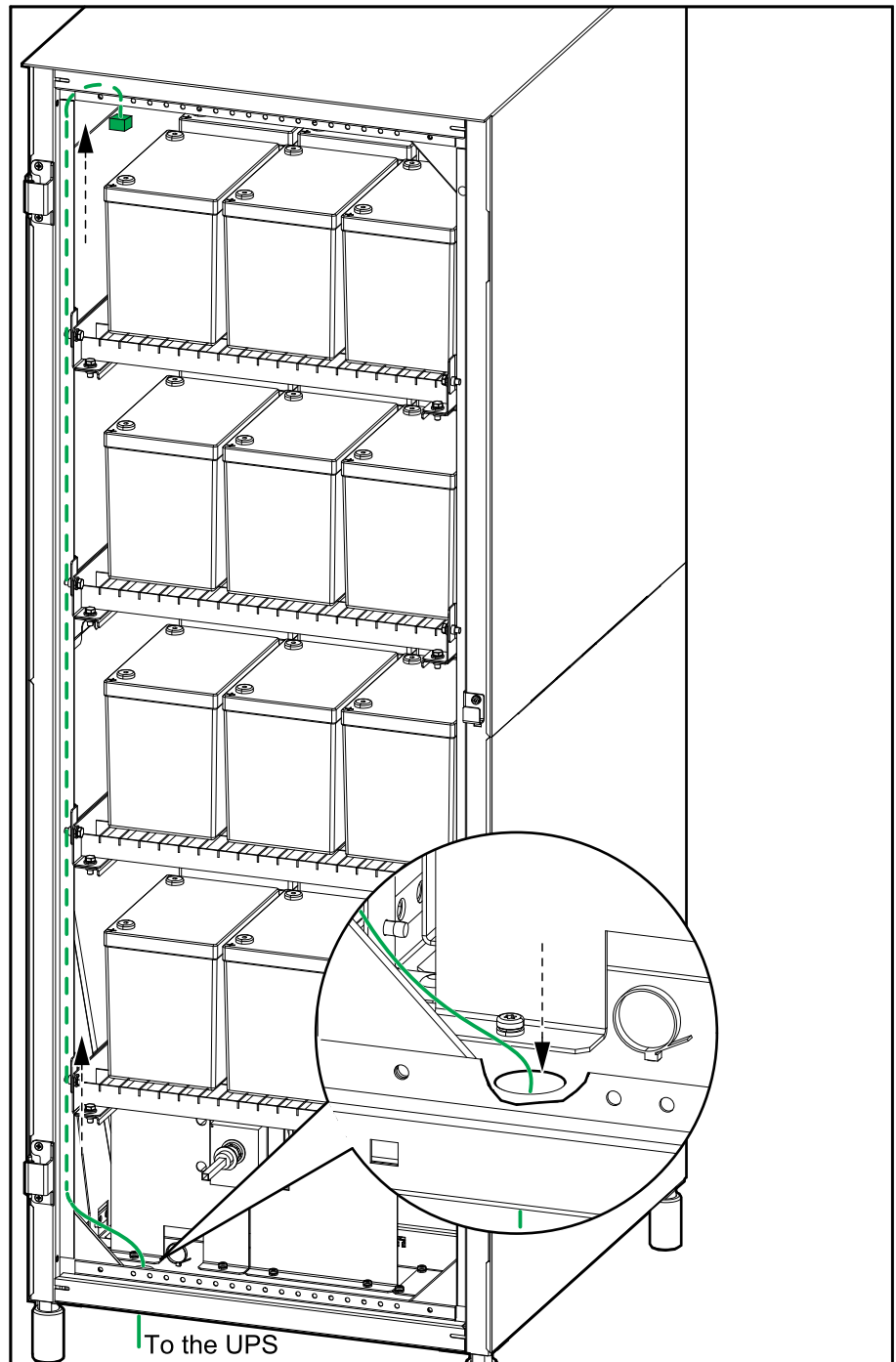


Classic Battery Cabinet GVSCBAT10B



11. Install the battery temperature sensor in the top left corner of the classic battery cabinet. One battery temperature sensor is provided with the UPS.

Front View of the Classic Battery Cabinet



▲ WARNING

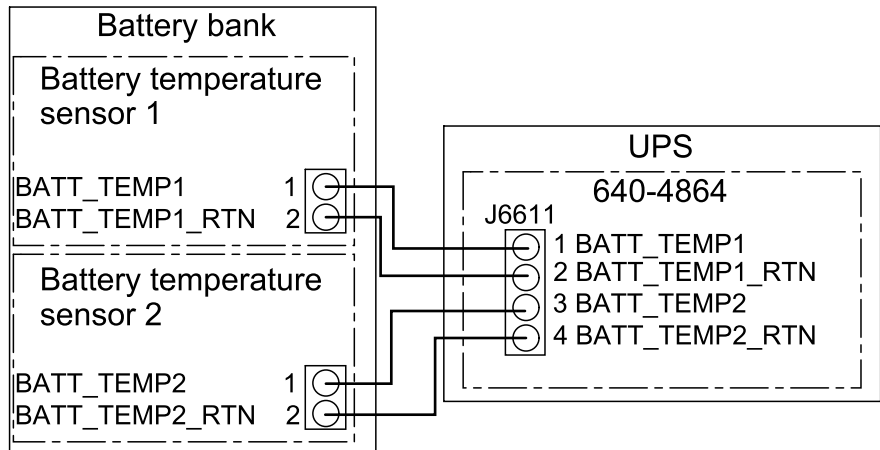
HAZARD OF FIRE

Position the temperature sensor as described to ensure correct temperature measurements.

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

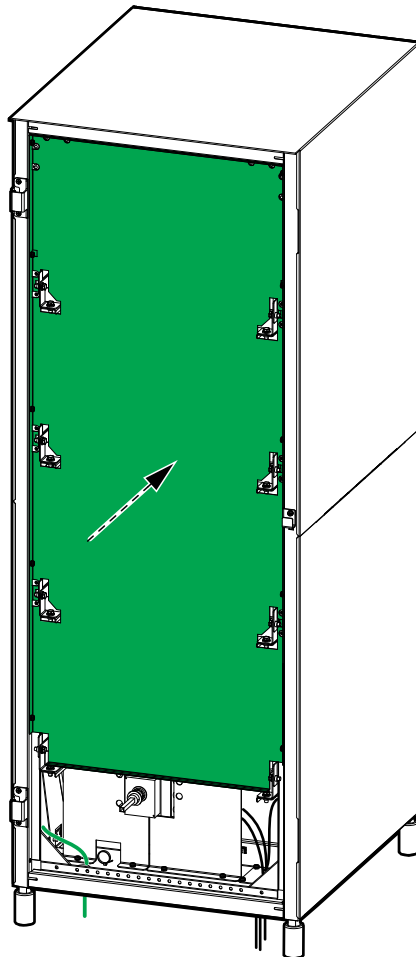
- Route the battery temperature sensor cables through the bottom of the classic battery cabinet(s) to the UPS and connect as shown.

NOTE: The battery temperature sensor cables are considered Class 2 and SELV. Class 2 and SELV circuits must be isolated from the primary circuitry.



- Reinstall the upper plate.

Front View of the Classic Battery Cabinet



Add Translated Safety Labels to Your Product

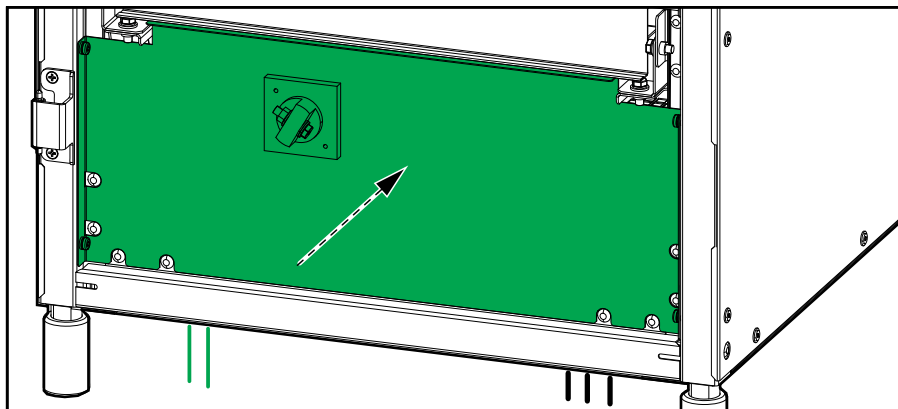
The safety labels on your product are in English and French. Sheets of translated replacement safety labels are provided with your product.

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.

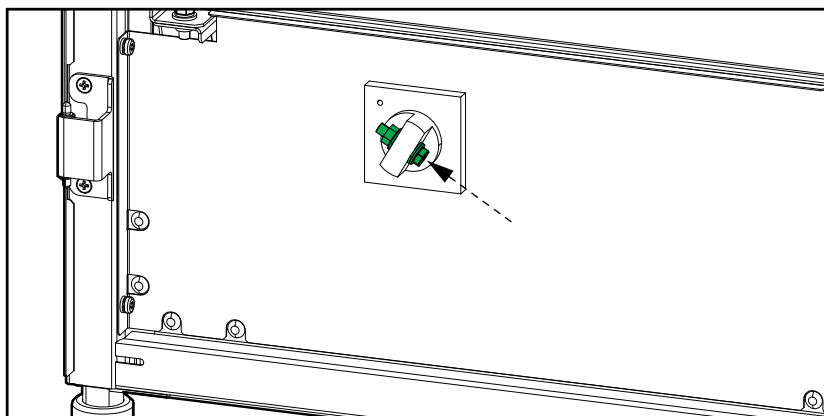
Final Installation

1. Reinstall the lower protection plate including the battery breaker front.

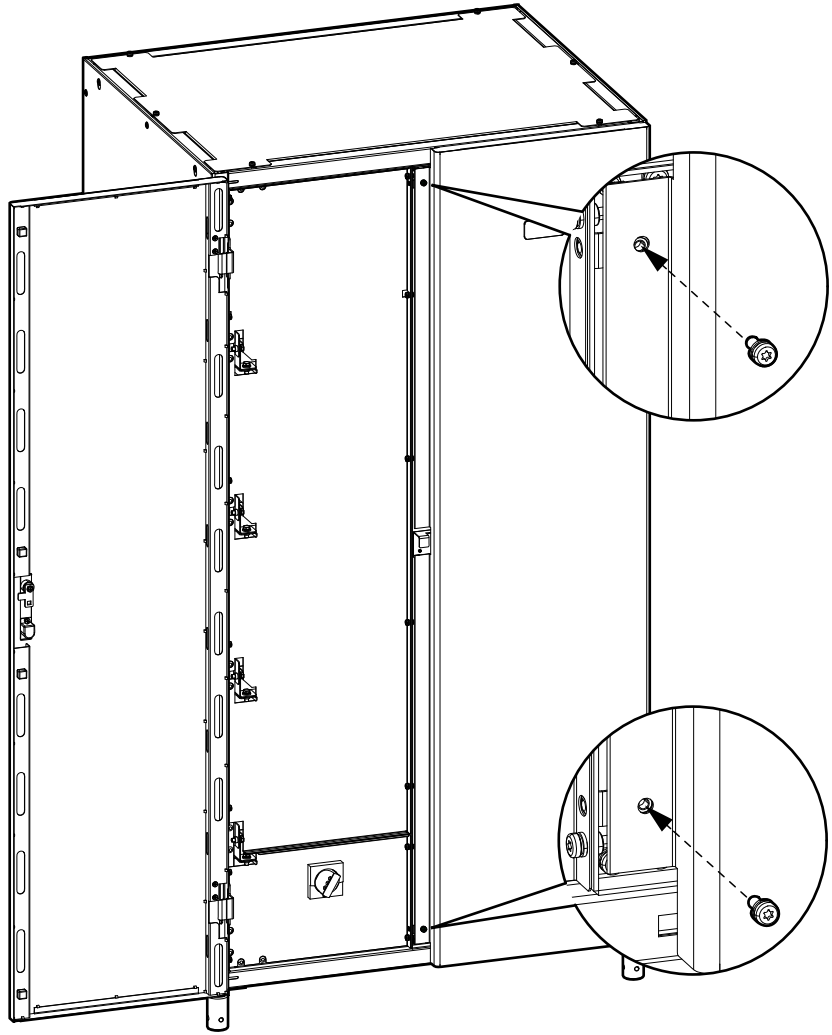
Front View of the Classic Battery Cabinet



2. Reinstall the bolt in the battery breaker.



3. **Only for classic battery cabinet GVSCBC10A and GVSCBC10B:** Close the right door and reinstall the two screws.



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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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