

Galaxy VS/VL/VXL, Easy UPS 3-Phase Modular, and Easy UPS 3M Advanced

Battery Breaker Box (GVBBB630EL-1CB, GVBBB630EL-2CB, GVBBB630EL-3CB)

Installation

Latest updates are available on the Schneider Electric website

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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.

Per IEC 62040-1: "Uninterruptible power systems (UPS) -- Part 1: Safety Requirements," this equipment, including battery access, must be inspected, installed and maintained by a skilled person.

The skilled person is a person with relevant education and experience to enable him or her to perceive risks and to avoid hazards which the equipment can create (reference IEC 62040-1, section 3.102).

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 system 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 system.

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

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR 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 will result in death or serious injury.

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.
- Failed batteries can reach temperatures that exceed the burn thresholds for touchable surfaces.
- 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 and burns by high short-circuit current. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance by a skilled person (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.

▲ CAUTION

RISK OF EQUIPMENT DAMAGE

- Mount the batteries in the UPS system, but do not connect the batteries until the UPS system is ready to be powered up. The time duration from battery connection 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 Breaker Specifications

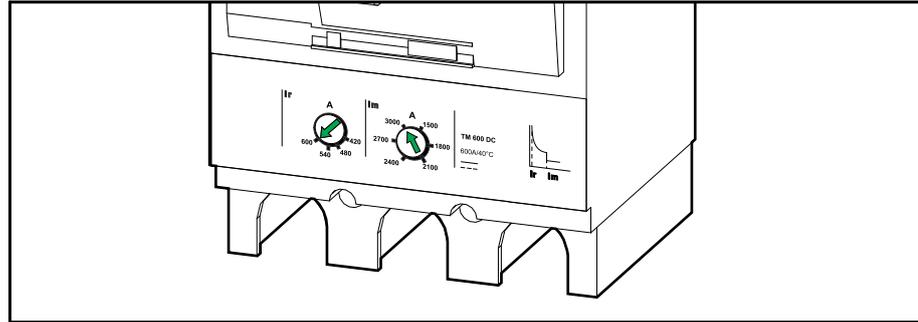
⚠️ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
This product must only be used with the Galaxy VS UPS, the Galaxy VL UPS, the Galaxy VXL UPS, the Easy UPS 3-Phase Modular, or the Easy UPS 3M Advanced.
Failure to follow these instructions will result in death or serious injury.

Battery breaker	C63S3TM600D
Battery type	VRLA, lead-acid, Lithium-ion
Maximum battery short-circuit level (kA)	35
Minimum short-circuit current to trip circuit breaker (A)	1600

Applicable Products

	GVBBB630EL-1CB	GVBBB630EL-2CB	GVBBB630EL-3CB
Galaxy VS	Yes	–	–
Galaxy VL	Yes	Yes	Yes
Galaxy VXL	Yes	Yes	Yes
Easy UPS 3-Phase Modular	Yes	Yes	–
Easy UPS 3M Advanced	Yes	Yes	–

Trip Settings



Battery Breaker Box with One Breaker (GVBBB630EL-1CB)

UPS rating	Max. battery backup time (minutes)	Battery blocks	Battery strings total	Battery breaker 1	
				Battery strings	Ir/Im settings
50 kW	Any	40-48	4	1-4	420/1500
100 kW	Any	40-48	4	1-4	420/1500
150 kW	Any	40-48	4	1-4	420/1500
200 kW	Any	40-48	4	1-4	480/1500
250 kW	<30	40-48	4	1-4	600/1500
300 kW	<30	44-48	4	1-4	600/1800

UPS rating	Minimum configuration			Maximum configuration			Battery blocks
	Minimum number of battery breaker boxes	Max. battery backup time (minutes)	Breaker setting	Maximum number of battery breaker boxes	Max. battery backup time (minutes)	Breaker setting	
500 kW	3xGVBBB630-EL-1CB	Any	480	8xGVBBB630-EL-1CB	Any	420	40-48
600 kW	3xGVBBB630-EL-1CB	<30	600	8xGVBBB630-EL-1CB	Any	420	40-48
625 kW	3xGVBBB630-EL-1CB	<30	600	8xGVBBB630-EL-1CB	Any	420	40-48
750 kW	4xGVBBB630-EL-1CB	<60	540	8xGVBBB630-EL-1CB	Any	420	40-48
875 kW	4xGVBBB630-EL-1CB	<30	600	8xGVBBB630-EL-1CB	Any	420	40-48
1000 kW	7xGVBBB630-EL-1CB	Any	420	8xGVBBB630-EL-1CB	Any	420	40-48
1125 kW	8xGVBBB630-EL-1CB	Any	420	8xGVBBB630-EL-1CB	Any	420	40-48
1250 kW	8xGVBBB630-EL-1CB	Any	420	8xGVBBB630-EL-1CB	Any	420	40-48

Battery Breaker Box with Two Breakers (GVBBB630EL-2CB)

UPS rating	Max. battery backup time (minutes)	Battery blocks	Battery strings total	Battery breaker 1		Battery breaker 2	
				Battery strings	Ir/lm settings	Battery strings	Ir/lm settings
250 kW	Any	40-48	2	1	420/1500	1	420/1500
250 kW		40-48	3	2	420/1500	1	420/1500
250 kW		40-48	4	2	420/1500	2	420/1500
250 kW		40-48	5	3	420/1500	2	420/1500
250 kW		40-48	6	3	420/1500	3	420/1500
250 kW		40-48	7	4	420/1500	3	420/1500
250 kW		40-48	8	4	420/1500	4	420/1500
300 kW	Any	40-48	2	1	420/1500	1	420/1500
300 kW	<60	40-48	3	2	480/1500	1	420/1500
300 kW	Any	40-48	4	2	420/1500	2	420/1500
300 kW		40-48	5	3	480/1500	2	420/1500
300 kW		40-48	6	3	420/1500	3	420/1500
300 kW		40-48	7	4	420/1500	3	420/1500
300 kW		40-48	8	4	420/1500	4	420/1500
350 kW	Any	40-48	2	1	420/1500	1	420/1500
350 kW	<30	40-48	3	2	600/1500	1	420/1500
350 kW	Any	40-48	4	2	420/1500	2	420/1500
350 kW	<60	40-48	5	3	540/1500	2	420/1500
350 kW	Any	40-48	6	3	420/1500	3	420/1500
350 kW	<60	40-48	7	4	480/1500	3	420/1500
350 kW	Any	40-48	8	4	420/1500	4	420/1500
400 kW	<30	40-48	2	1	480/1500	1	480/1500
400 kW	<15	40-48	3	2	540/1500	1	420/1500
400 kW	<30	40-48	4	2	480/1500	2	480/1500
400 kW		40-48	5	3	540/1500	2	420/1500
400 kW		40-48	6	3	480/1500	3	480/1500
400 kW		40-48	7	4	540/1500	3	420/1500
400 kW		40-48	8	4	480/1500	4	480/1500
450 kW	<30	41-48	2	1	540/1500	1	540/1500
450 kW	<30	41-48	4	2	540/1500	2	540/1500
450 kW	<15	41-48	5	3	600/1500	2	420/1500
450 kW	<30	41-48	6	3	540/1500	3	540/1500
450 kW	<15	41-48	7	4	600/1500	3	480/1500
450 kW	<30	41-48	8	4	540/1500	4	540/1500
500 kW	<30	40-48	2	1	600/1500	1	600/1500
500 kW		40-48	4	2	600/1500	2	600/1500
500 kW		40-48	6	3	600/1500	3	600/1500
500 kW		40-48	8	4	600/1500	4	600/1500

UPS rating	Minimum configuration			Maximum configuration			Battery blocks
	Minimum number of battery breaker boxes	Max. battery backup time (minutes)	Breaker setting	Maximum number of battery breaker boxes	Max. battery backup time (minutes)	Breaker setting	
500 kW	1xGVBBB630-EL-2CB	<30	600	4xGVBBB630-EL-2CB	Any	420	40-48
600 kW	2xGVBBB630-EL-2CB	Any	420	4xGVBBB630-EL-2CB	Any	420	40-48
625 kW	2xGVBBB630-EL-2CB	Any	480	4xGVBBB630-EL-2CB	Any	420	40-48
750 kW	2xGVBBB630-EL-2CB	Any	540	4xGVBBB630-EL-2CB	Any	420	40-48
875 kW	2xGVBBB630-EL-2CB	<60	600	4xGVBBB630-EL-2CB	Any	420	40-48
1000 kW	2xGVBBB630-EL-2CB	<30	600	4xGVBBB630-EL-2CB	Any	420	40-48
1125 kW	2xGVBBB630-EL-2CB	<15	600	4xGVBBB630-EL-2CB	Any	420	40-48
1250 kW	4xGVBBB630-EL-2CB	Any	480	4xGVBBB630-EL-2CB	Any	480	40-48

Battery Breaker Box with Three Breakers (GVBBB630EL-3CB)

UPS rating	Max. battery backup time (minutes)	Battery blocks	Battery strings total	Battery breaker 1		Battery breaker 2		Battery breaker 3	
				Battery strings	Ir/Im settings	Battery strings	Ir/Im settings	Battery strings	Ir/Im settings
400 kW	Any	40-48	3	1	420/1500	1	420/1500	1	420/1500
400 kW	>60	40-48	4	2	600/1500	1	600/1500	1	600/1500
400 kW	Any	40-48	5	2	480/1500	2	480/1500	1	480/1500
400 kW		40-48	6	2	420/1500	2	420/1500	2	420/1500
400 kW		40-48	7	3	540/1500	2	540/1500	2	540/1500
400 kW		40-48	8	3	480/1500	3	480/1500	2	480/1500
400 kW		40-48	9	3	420/1500	3	420/1500	3	420/1500
400 kW		40-48	10	4	480/1500	3	480/1500	3	480/1500
400 kW		40-48	11	4	480/1500	4	480/1500	3	480/1500
400 kW		40-48	12	4	420/1500	4	420/1500	4	420/1500
450 kW		Any	40-48	3	1	480/1500	1	480/1500	1
450 kW	<60	40-48	4	2	600/1500	1	600/1500	1	600/1500
450 kW	Any	40-48	5	2	480/1500	2	480/1500	1	480/1500
450 kW		40-48	6	2	600/1500	2	600/1500	2	600/1500
450 kW		40-48	7	3	540/1500	2	540/1500	2	540/1500
450 kW		40-48	8	3	480/1500	3	480/1500	2	480/1500
450 kW		40-48	9	3	600/1500	3	600/1500	3	600/1500
450 kW		40-48	10	4	540/1500	3	540/1500	3	540/1500
450 kW		40-48	11	4	480/1500	4	480/1500	3	480/1500
450 kW		40-48	12	4	600/1500	4	600/1500	4	600/1500
500 kW	Any	40-48	3	1	420/1500	1	420/1500	1	420/1500
500 kW	<30	40-48	4	2	600/1500	1	420/1500	1	420/1500

UPS rating	Max. battery backup time (minutes)	Battery blocks	Battery strings total	Battery breaker 1		Battery breaker 2		Battery breaker 3	
				Battery strings	Ir/lm settings	Battery strings	Ir/lm settings	Battery strings	Ir/lm settings
500 kW	<60	40-48	5	2	420/1500	2	480/1500	1	420/1500
500 kW	Any	40-48	6	2	420/1500	2	420/1500	2	420/1500
500 kW	<60	40-48	7	3	540/1500	2	420/1500	2	420/1500
500 kW	Any	40-48	8	3	480/1500	3	480/1500	2	420/1500
500 kW		40-48	9	3	420/1500	3	420/1500	3	420/1500
500 kW	<60	40-48	10	4	480/1500	3	420/1500	3	420/1500
500 kW	Any	40-48	11	4	480/1500	4	480/1500	3	420/1500
500 kW		40-48	12	4	420/1500	4	420/1500	4	420/1500

UPS rating	Minimum configuration			Maximum configuration			Battery blocks
	Minimum number of battery breaker boxes	Max. battery backup time (minutes)	Breaker setting	Maximum number of battery breaker boxes	Max. battery backup time (minutes)	Breaker setting	
500 kW	1xGVBBB630-EL-3CB	Any	480	2xGVBBB630-EL-3CB	Any	420	40-48
600 kW	1xGVBBB630-EL-3CB	<60	600	2xGVBBB630-EL-3CB	Any	420	40-48
625 kW	1xGVBBB630-EL-3CB	<60	600	2xGVBBB630-EL-3CB	Any	420	40-48
750 kW	1xGVBBB630-EL-3CB	<30	600	2xGVBBB630-EL-3CB	Any	420	40-48
875 kW	1xGVBBB630-EL-3CB	<15	600	2xGVBBB630-EL-3CB	Any	420	40-48
1000 kW	2xGVBBB630-EL-3CB	Any	480	2xGVBBB630-EL-3CB	Any	480	40-48
1125 kW	2xGVBBB630-EL-3CB	Any	540	2xGVBBB630-EL-3CB	Any	540	40-48
1250 kW	2xGVBBB630-EL-3CB	<60	600	2xGVBBB630-EL-3CB	<60	600	40-48

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 cable size is 120 mm² for GVBBB630EL-1CB. The maximum allowable cable size is 240 mm² for GVBBB630EL-2CB and GVBBB630EL-3CB.

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

Refer to the UPS installation manual for recommended cable sizes.

Torque Specifications

Bolt size	Torque
M4	1.7 Nm
M5	2.2 Nm
M6	5 Nm
M8	17.5 Nm
M10	30 Nm
M12	50 Nm

Battery Breaker Box Shipping Weights and Dimensions

Commercial reference	Weight kg	Height mm ¹	Width mm	Depth mm
GVBBB630EL-1CB	40	560	800	1200
GVBBB630EL-2CB	72	560	1000	1200
GVBBB630EL-3CB	82	560	1000	1200

Battery Breaker Box Weights and Dimensions

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
GVBBB630EL-1CB	35	800	500	280
GVBBB630EL-2CB	66	1000	750	280
GVBBB630EL-3CB	76	1000	750	280

1. The product is packaged in a horizontal position, so the shipping height and depth dimensions differ from the product itself.

Environment

	Operating	Storage
Temperature	0 °C to 40 °C	-25 °C to 55 °C
Relative humidity	0-95% non-condensing	0-95% non-condensing
Color	RAL 9003, gloss level 85%	
Protection class	IP20	

Compliance

Safety	IEC 62040-1:2017, Edition 2.0, Uninterruptible power systems (UPS) – Part 1: Safety requirements IEC 62040-1: 2008-6, 1st edition, Uninterruptible Power Systems (UPS) – Part 1: General and safety requirements for UPS IEC 62040-1:2013-01, 1st edition amendment 1
Markings	CE, RCM, EAC, WEEE
Transportation	IEC TR 60721-4-2, 2M2
Seismic	ICC-ES AC156, Level 1
Pollution degree	2
Overvoltage category	III

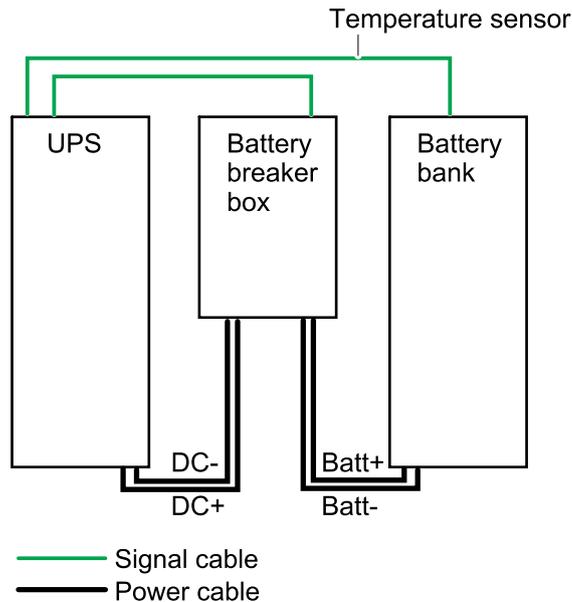
Installation Procedure

⚡⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Place the battery breaker box as close to the battery bank as possible to limit the length of unprotected battery cable. The distance between the battery bank and the UPS must not exceed 200 m. Contact Schneider Electric for installations with a longer distance.

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



NOTE: Installation of the battery temperature sensor is not described in this manual, see the UPS installation manual for details.

1. Mount the Battery Breaker Box to the Wall, page 20.
2. Prepare the Battery Breaker Box for Cables, page 21.
3. Connect the signal cables. Perform one of the following procedures:
 - Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VS UPS, page 23, or
 - Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VL UPS, page 25, or
 - Connect the Signal Cables for GVBBB630EL-2CB and GVBBB630EL-3CB to the Galaxy VL UPS, page 27, or
 - Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VXL UPS, page 30, or
 - Connect the Signal Cables for GVBBB630EL-2CB to the Galaxy VXL UPS, page 35, or
 - Connect the Signal Cables for GVBBB630EL-3CB to the Galaxy VXL UPS, page 39, or
 - Connect the Signal Cables for GVBBB630EL-1CB to the Easy UPS 3-Phase Modular, page 42, or
 - Connect the Signal Cables for GVBBB630EL-2CB to the Easy UPS 3-Phase Modular, page 44, or
 - Connect the Signal Cables for GVBBB630EL-1CB to the Easy UPS 3M Advanced, page 46, or
 - Connect the Signal Cables for GVBBB630EL-2CB to the Easy UPS 3M Advanced, page 48.

4. Connect the Power Cables, page 50.
5. Add Translated Safety Labels to Your Product, page 53.
6. Final Installation Steps, page 54.

For moving or decommissioning the battery breaker box after installation has been completed, see Decommission or Move the Battery Breaker Box to a New Location, page 55.

Mount the Battery Breaker Box to the Wall

⚠ CAUTION

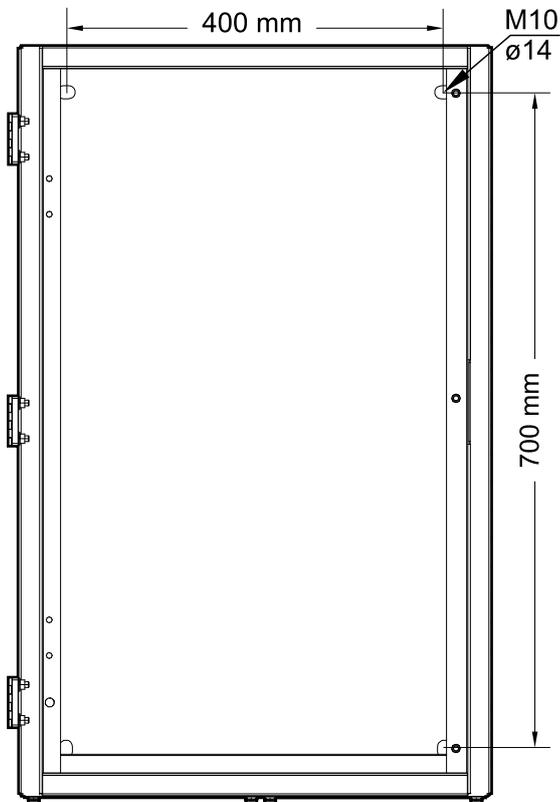
RISK OF INJURY OR EQUIPMENT DAMAGE

- Mount the battery breaker box to a wall or a rack that is structurally sound and able to support the weight of the unit.
- Use appropriate hardware (not supplied) to mount the battery breaker box to the wall.

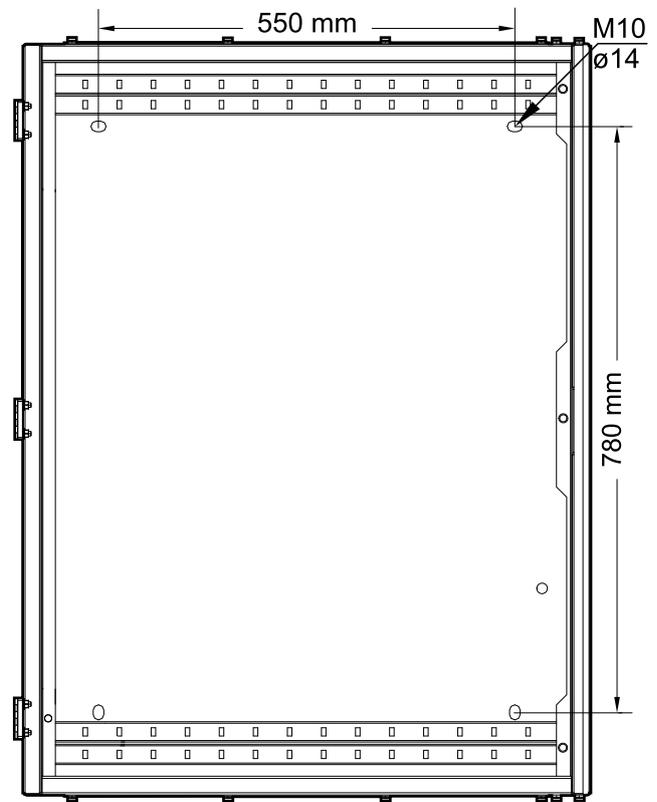
Failure to follow these instructions can result in injury or equipment damage.

NOTE: Four M10 x 30 torx and nuts are supplied for mounting the battery breaker box to a rack.

GVBBB630EL-1CB



GVBBB630EL-2CB and GVBBB630EL-3CB



1. Measure and mark the four mounting hole locations on the wall.
2. Drill holes in each of the four marked locations.
3. Loosen the three screws and open the inner door.
4. Mount the battery breaker box to the wall.

Prepare the Battery Breaker Box for Cables

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

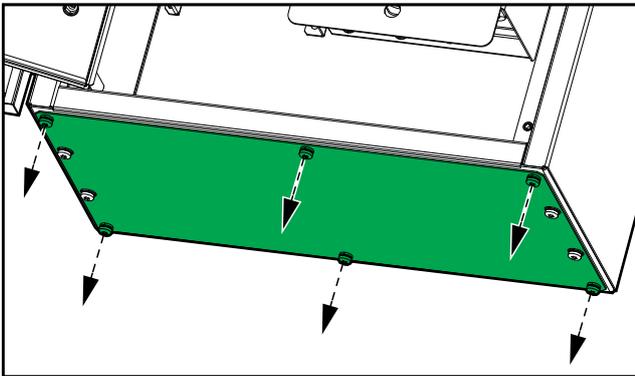
Do not drill or punch holes for cables or grommets with the gland plates installed, and do not drill or punch holes in close proximity to the UPS.

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

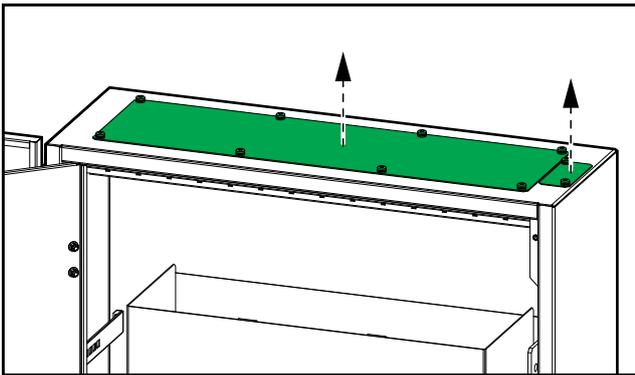
1. Remove the gland plates:

- For **GVBBB630EL-1CB**: Remove the bottom gland plates.
- For **GVBBB630EL-2CB**: Remove the top and bottom gland plates or only the bottom gland plates.
- For **GVBBB630EL-3CB**: Remove the top and bottom gland plates.

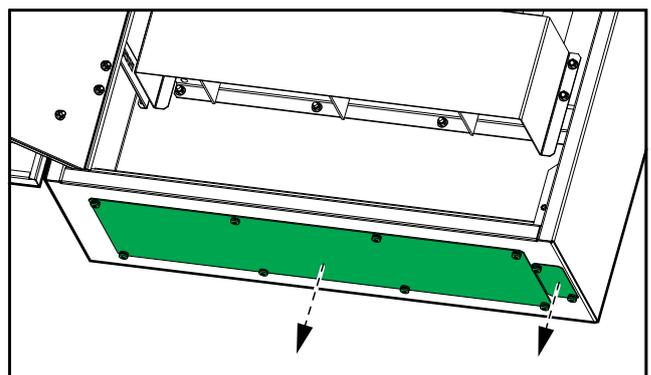
GVBBB630EL-1CB



GVBBB630EL-2CB and GVBBB630EL-3CB



GVBBB630EL-2CB and GVBBB630EL-3CB



2. Drill or punch holes for power cables (A) and signal cables (B) or grommets in the gland plates, install grommets (if applicable), and reinstall the gland plates.

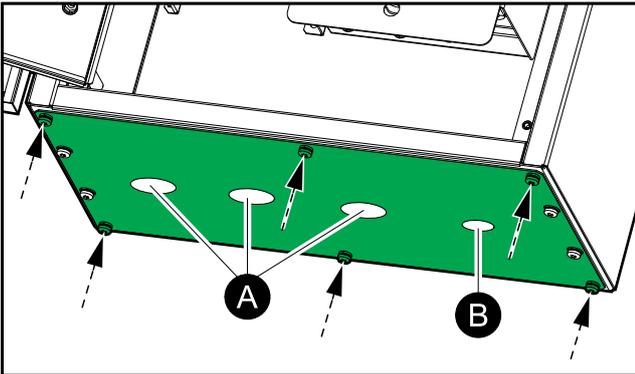
⚡ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

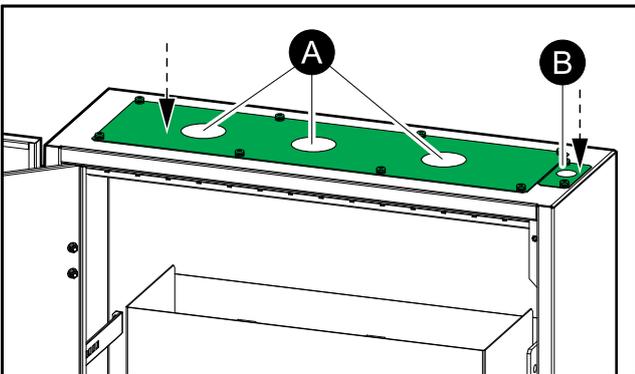
Ensure that there are no sharp edges that can damage the cables.

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

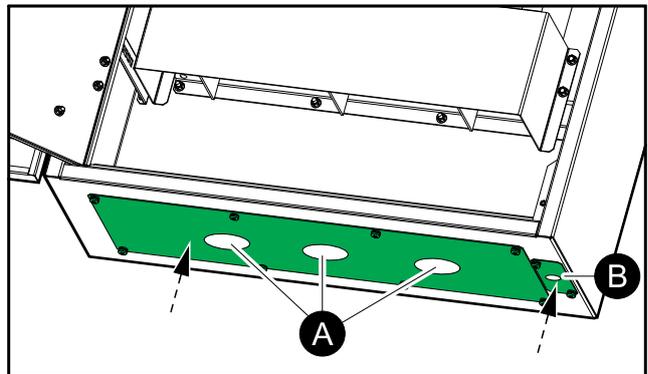
GVBBB630EL-1CB



GVBBB630EL-2CB and GVBBB630EL-3CB



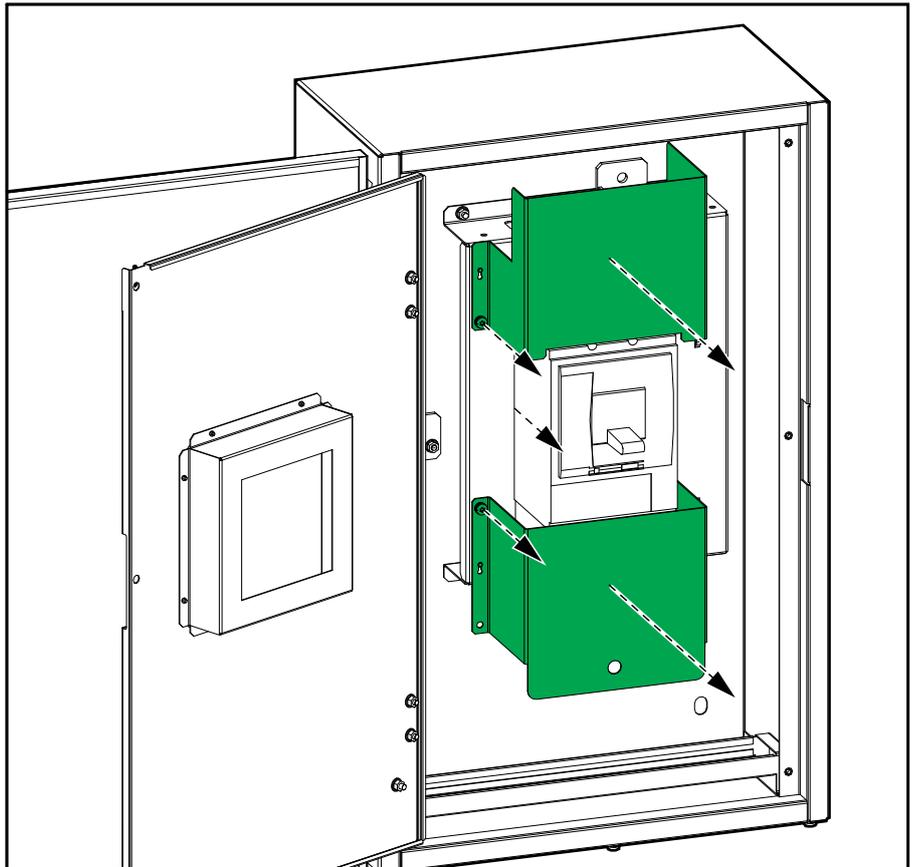
GVBBB630EL-2CB and GVBBB630EL-3CB



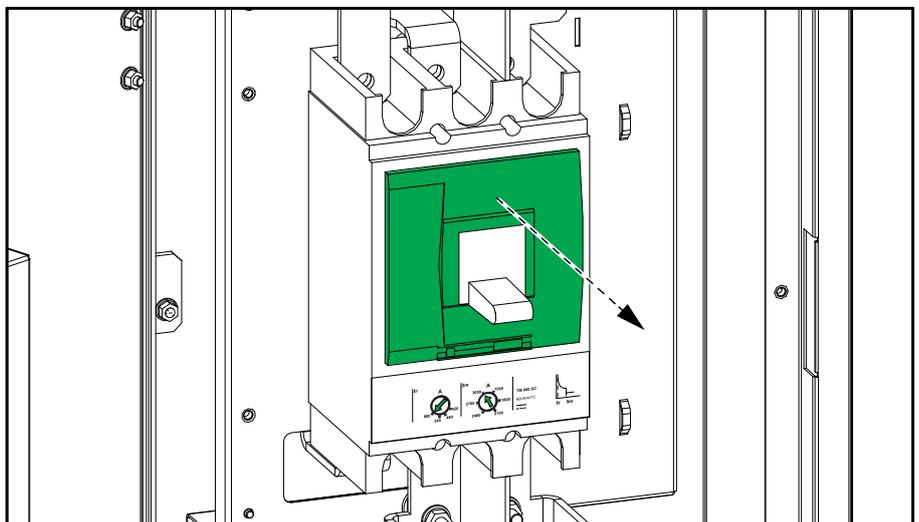
Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VS UPS

Recommended signal cable size	Maximum distance to the UPS
0.5 mm ²	50 meters
0.75 mm ²	100 meters
1.0 mm ²	200 meters

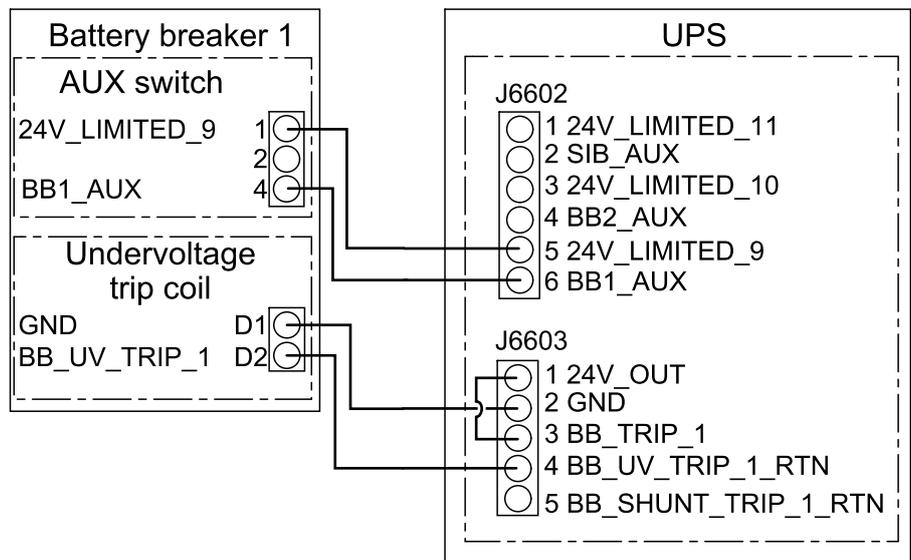
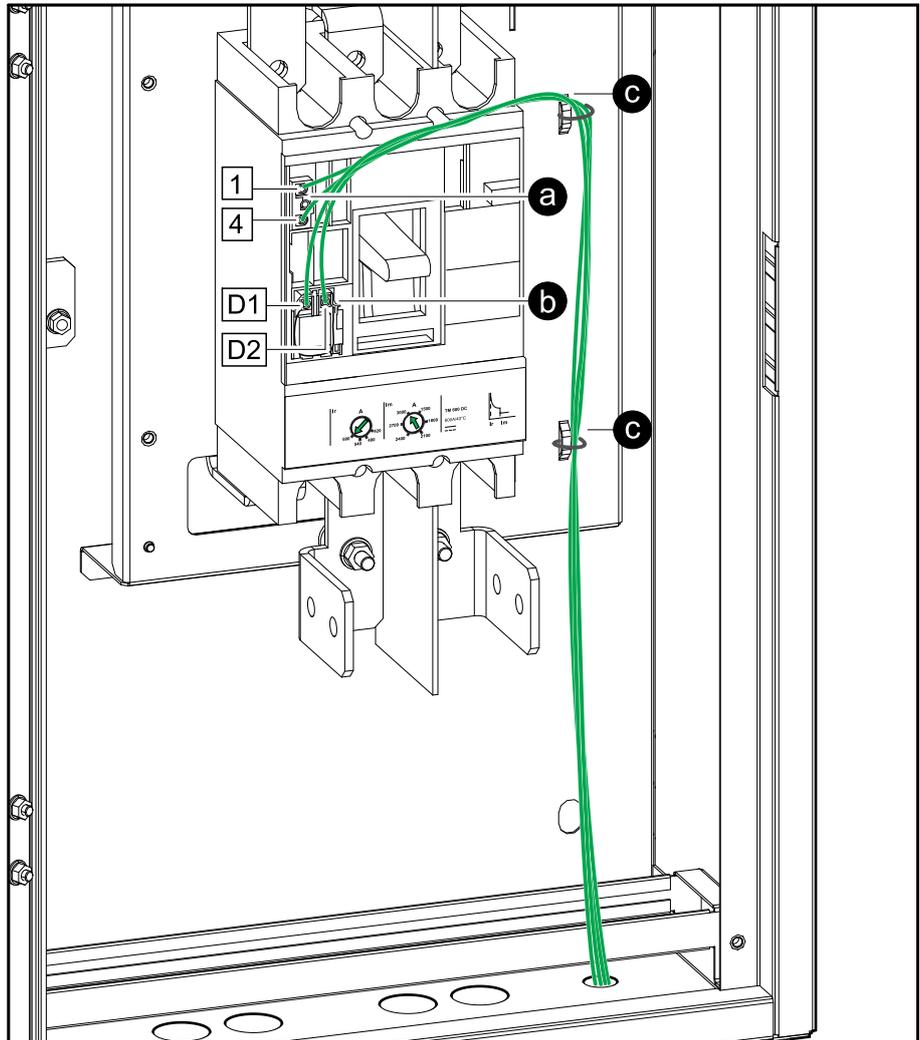
1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



3. Remove the cover on the battery breaker.



4. Route the signal cables through the bottom of the battery breaker box.
5. Connect the signal cables:
 - a. Connect the signal cables to the AUX switch.
 - b. Connect the signal cables to the undervoltage trip coil.
 - c. Fasten the signal cables with cable ties (provided) to the cable relief.

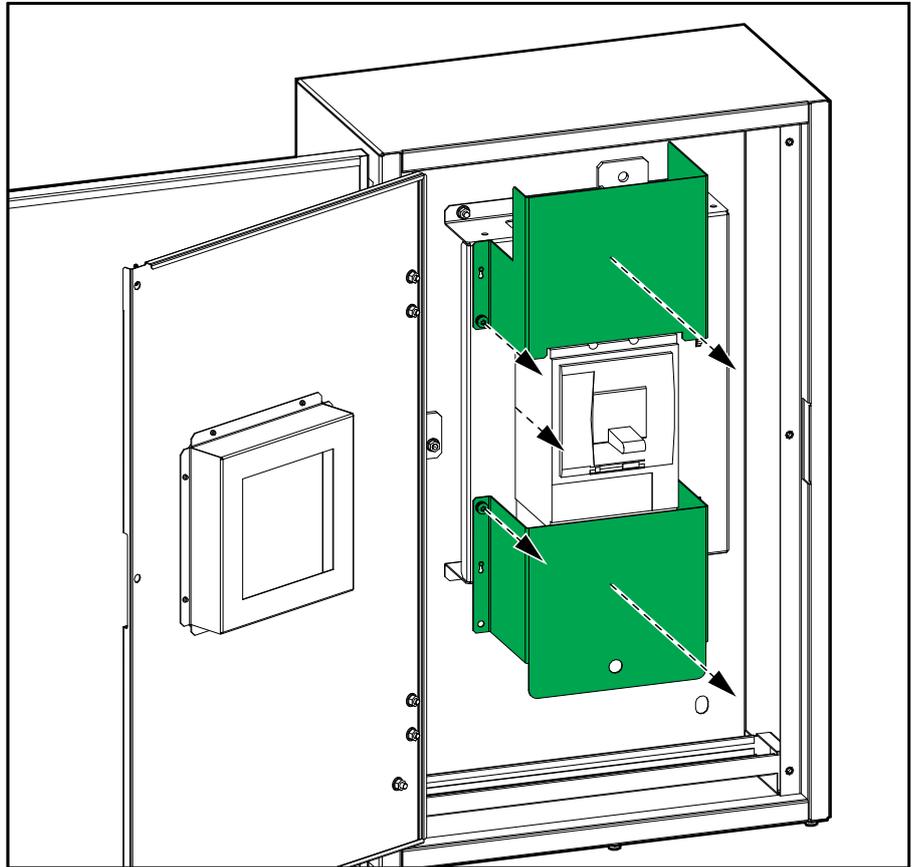


6. Reinstall the cover on the battery breaker.
7. Route the signal cables separately from the power cables.

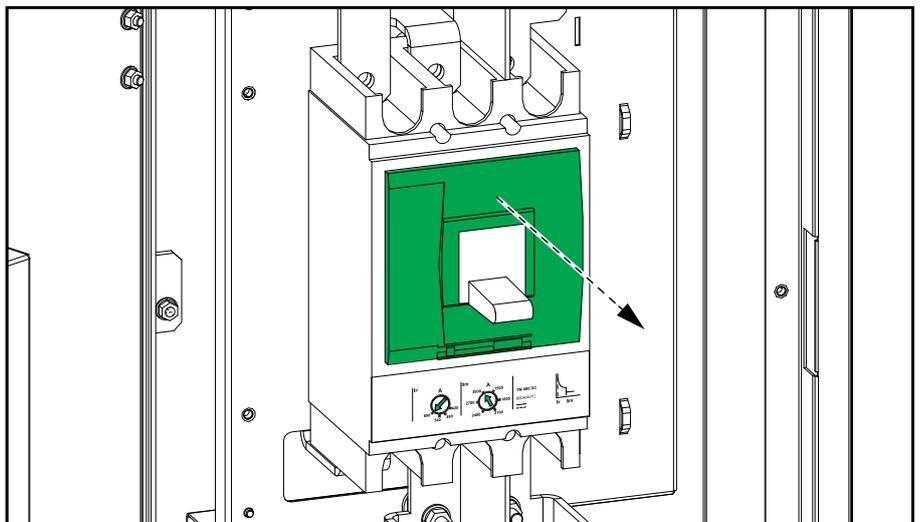
Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VL UPS

NOTE: Recommended signal cable size is 0.5 mm².

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



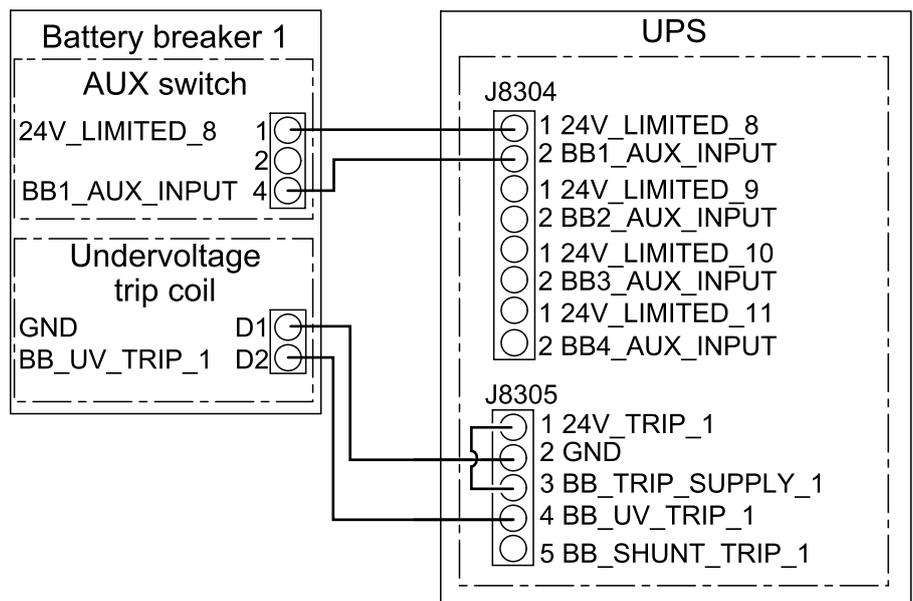
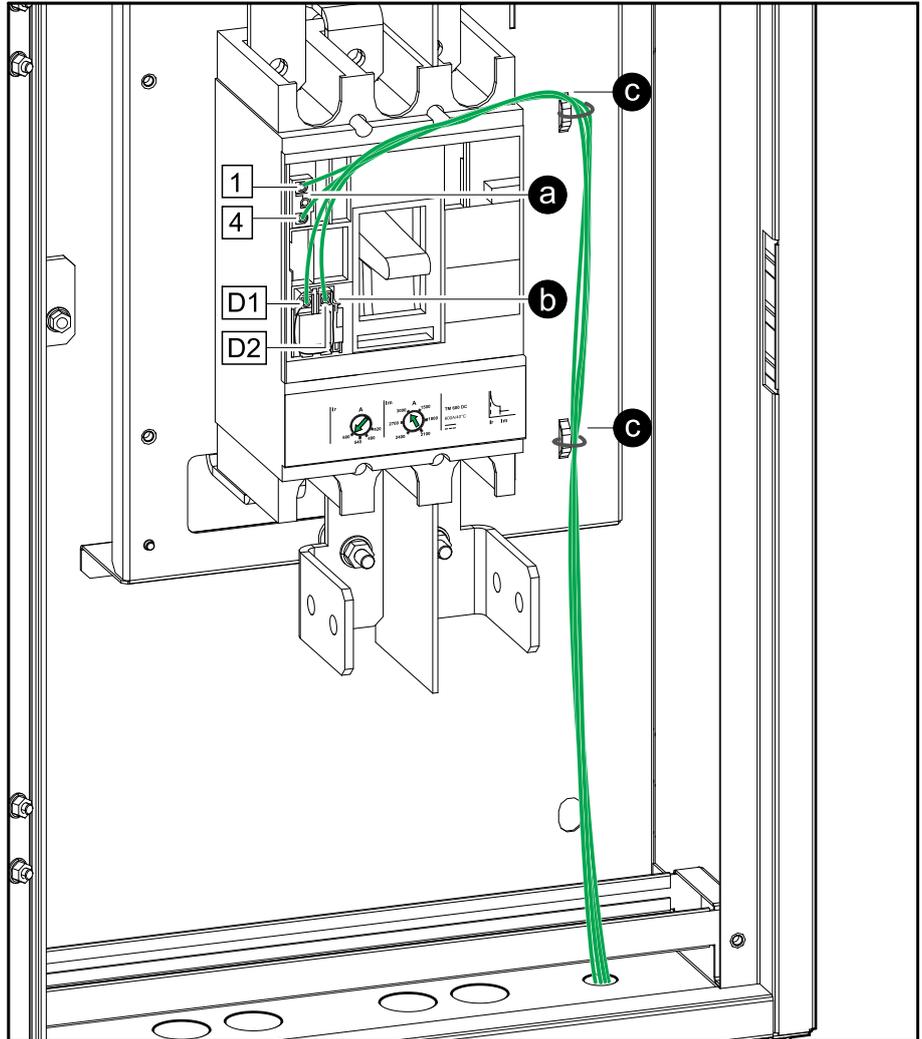
3. Remove the cover on the battery breaker.



4. Route the signal cables through the bottom of the battery breaker box.

5. Connect the signal cables:

- a. Connect the signal cables to the AUX switch.
- b. Connect the signal cables to the undervoltage trip coil.
- c. Fasten the signal cables with cable ties (provided) to the cable relief.



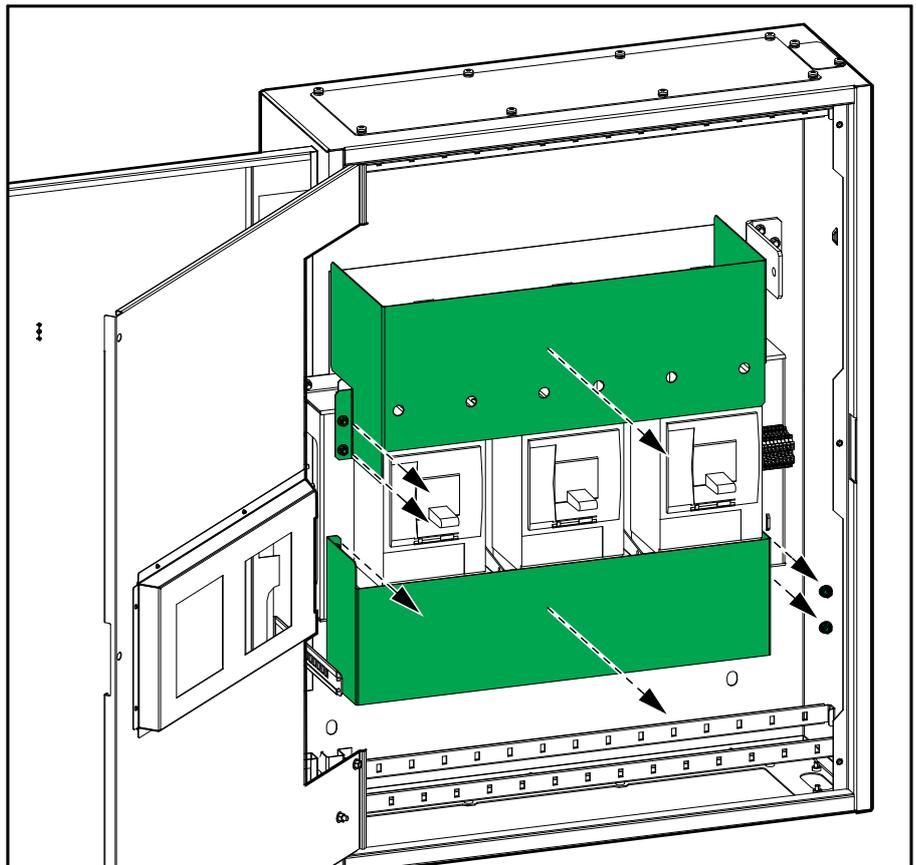
6. Reinstall the cover on the battery breaker.

7. Route the signal cables separately from the power cables.

Connect the Signal Cables for GVBBB630EL-2CB and GVBBB630EL-3CB to the Galaxy VL UPS

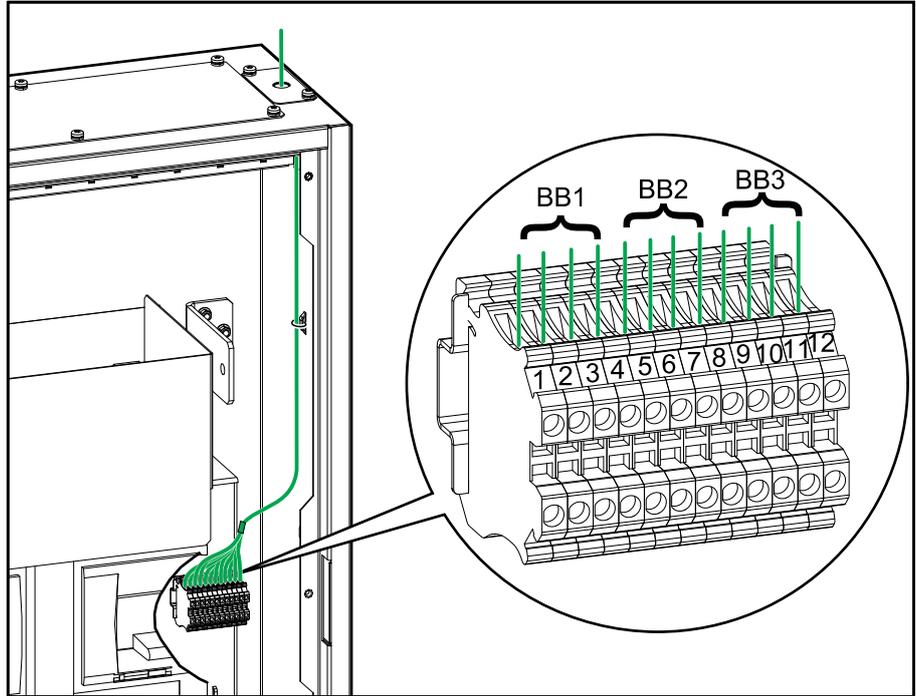
Recommended signal cable size	Maximum distance to the UPS
0.5 mm ²	50 meters
0.75 mm ²	100 meters
1.0 mm ²	200 meters

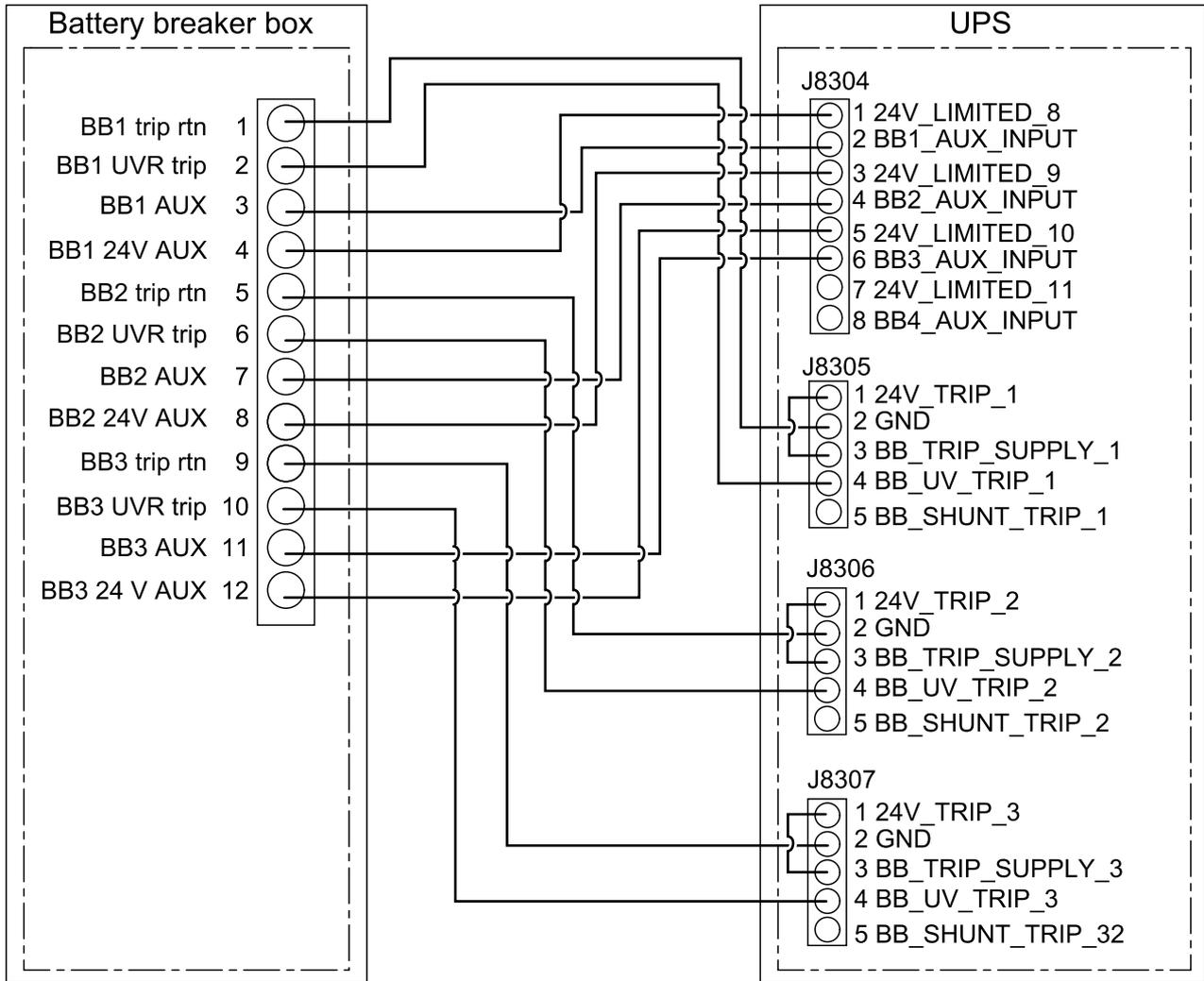
1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



3. Route the signal cables through the top or bottom of the battery breaker box.

4. Connect the signal cables to the control terminal block:
 - a. Connect terminals 1-4 for battery breaker 1 (BB1).
 - b. Connect terminals 5-8 for battery breaker 2 (BB2).
 - c. Connect terminals 9-12 for battery breaker 3 (BB3) when present.
 - d. Fasten the signal cables with cable ties (provided) to the cable relief.



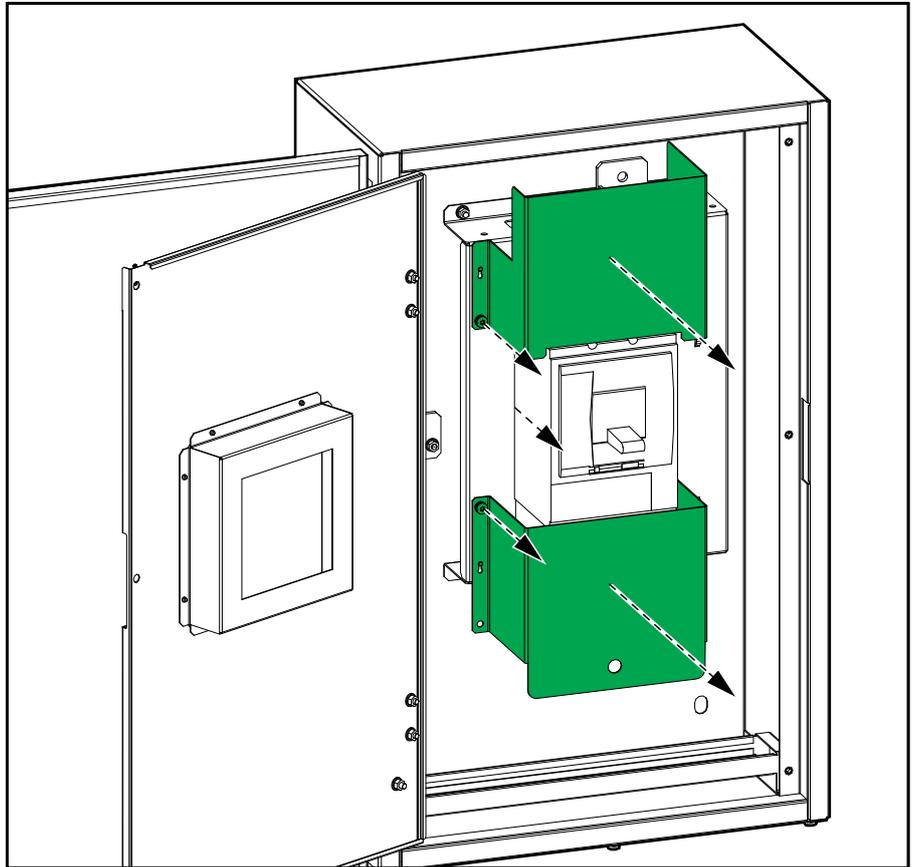


5. Route the signal cables separately from the power cables.

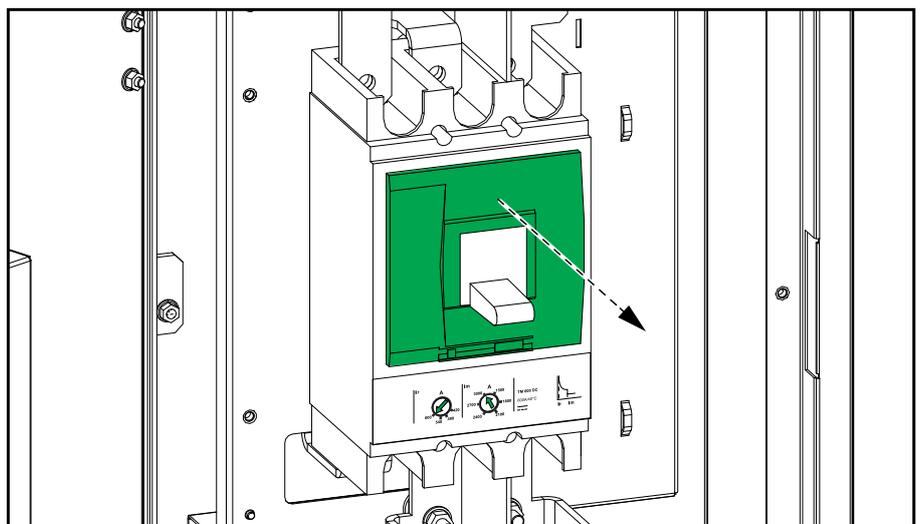
Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VXL UPS

NOTE: The recommended signal cable size is 0.5 mm².

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



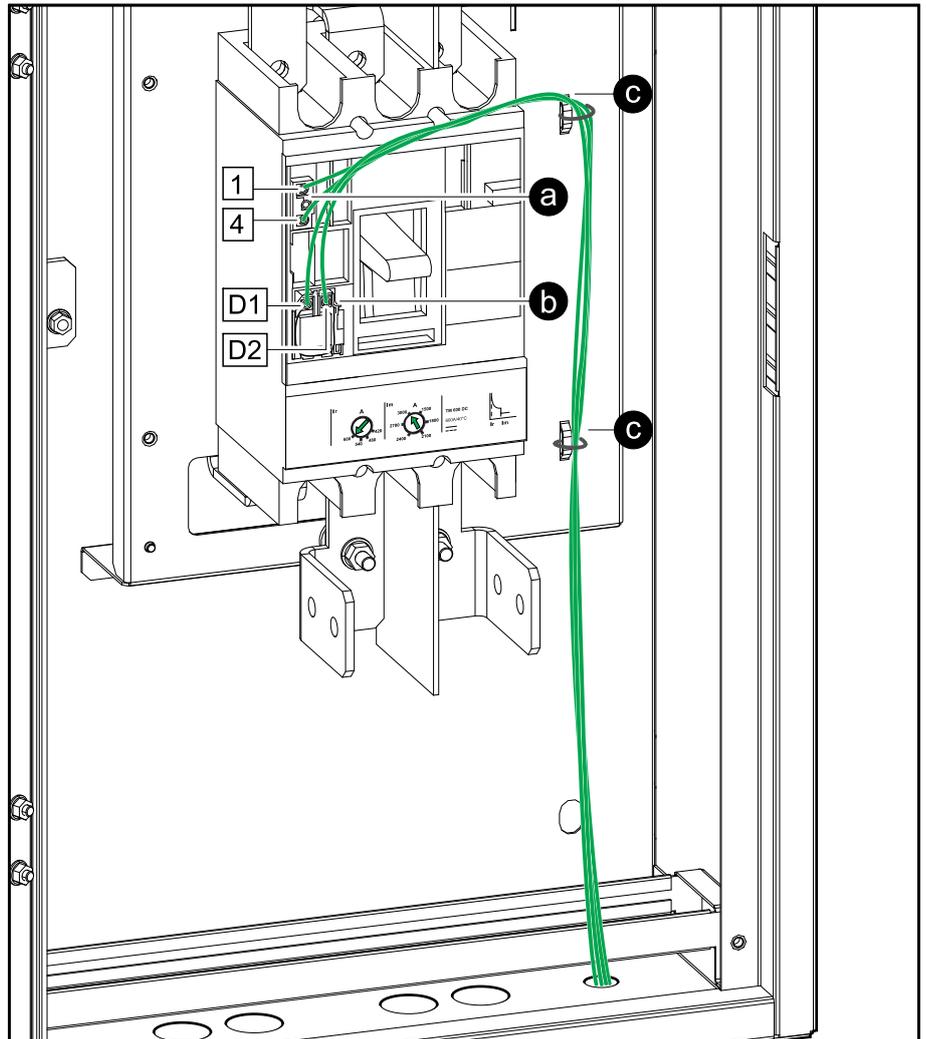
3. Remove the cover on the battery breaker.



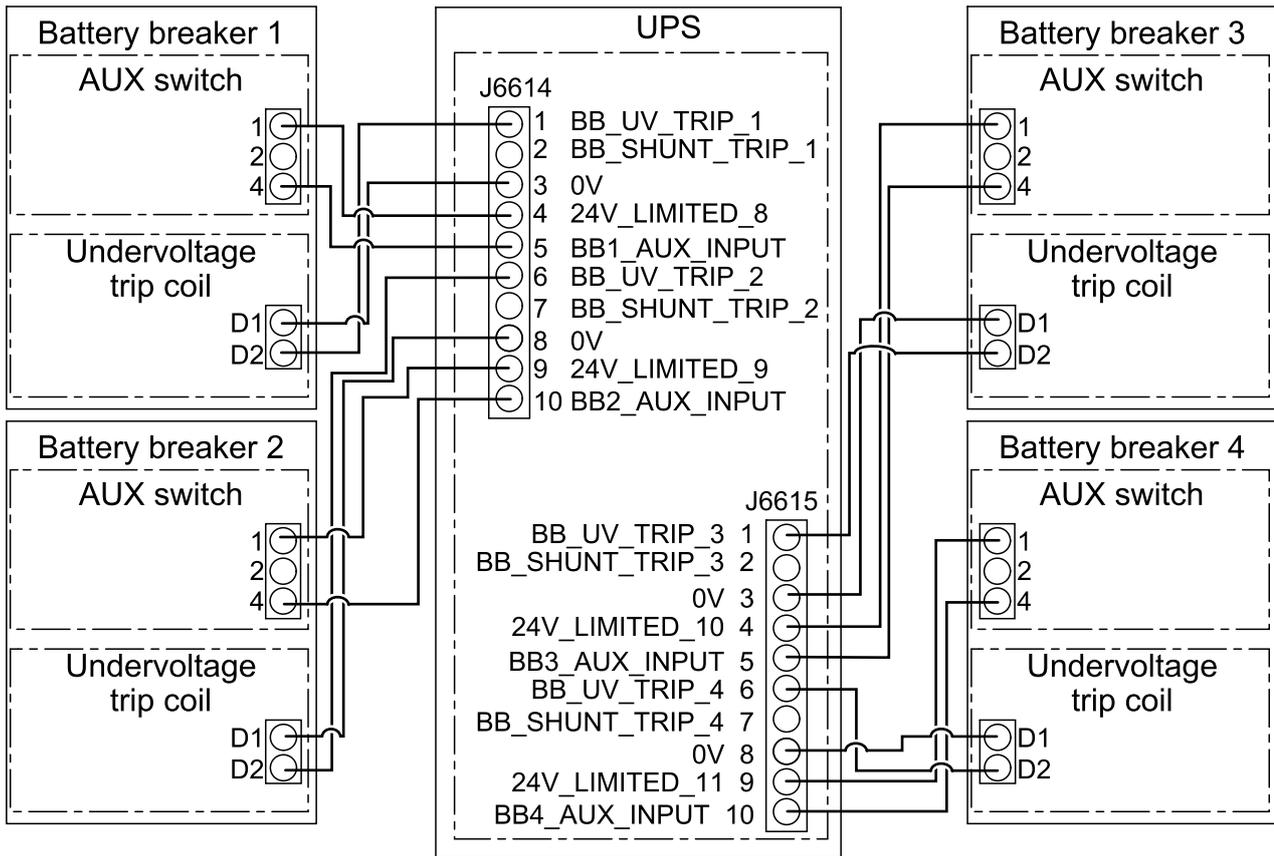
4. Route the signal cables through the bottom of the battery breaker box.

5. Connect the signal cables:

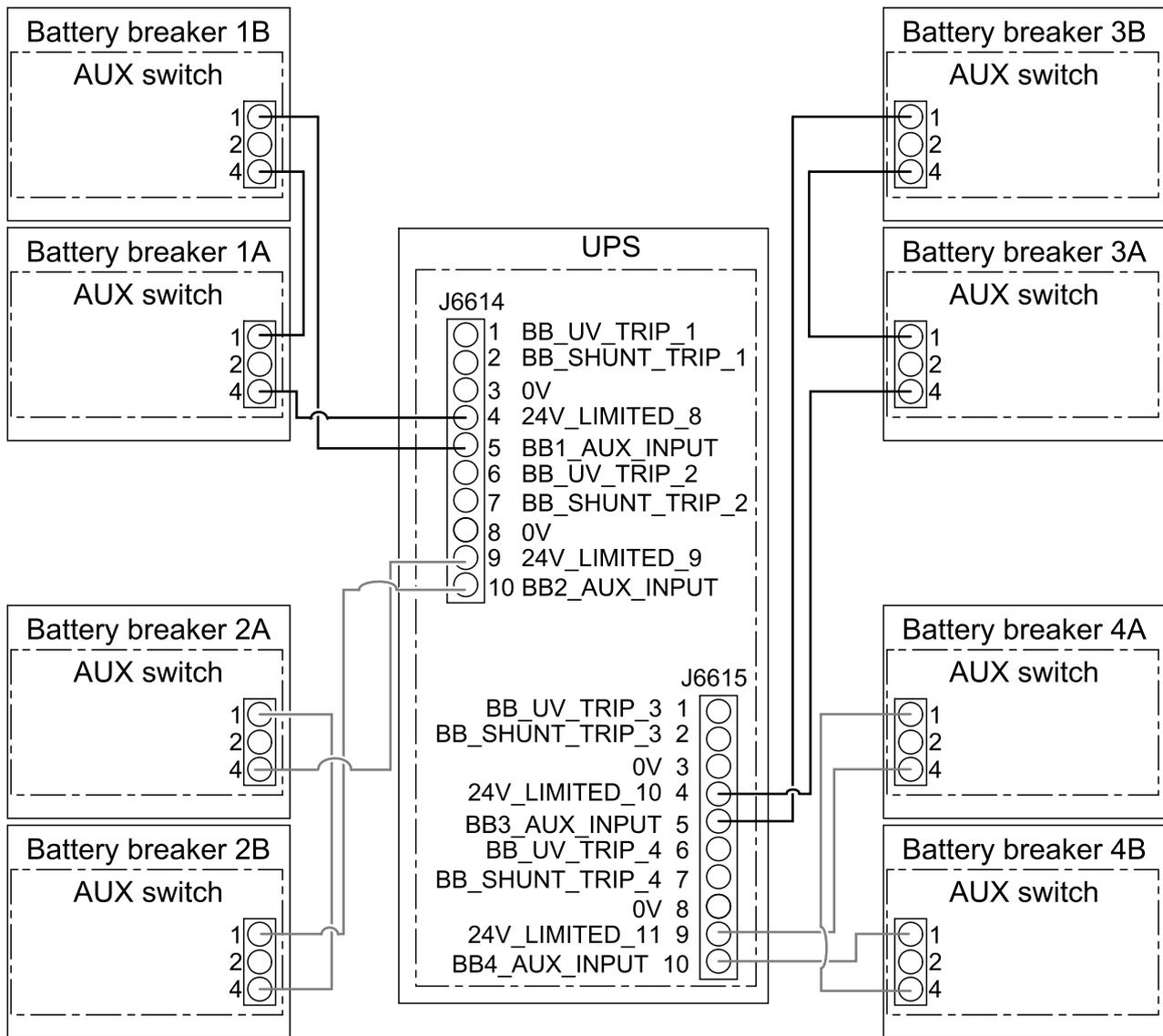
- a. Connect the signal cables to the AUX switch (1,4).
- b. Connect the signal cables to the undervoltage trip coil (D1, D2).
- c. Fasten the signal cables with cable ties (provided) to the cable relief.



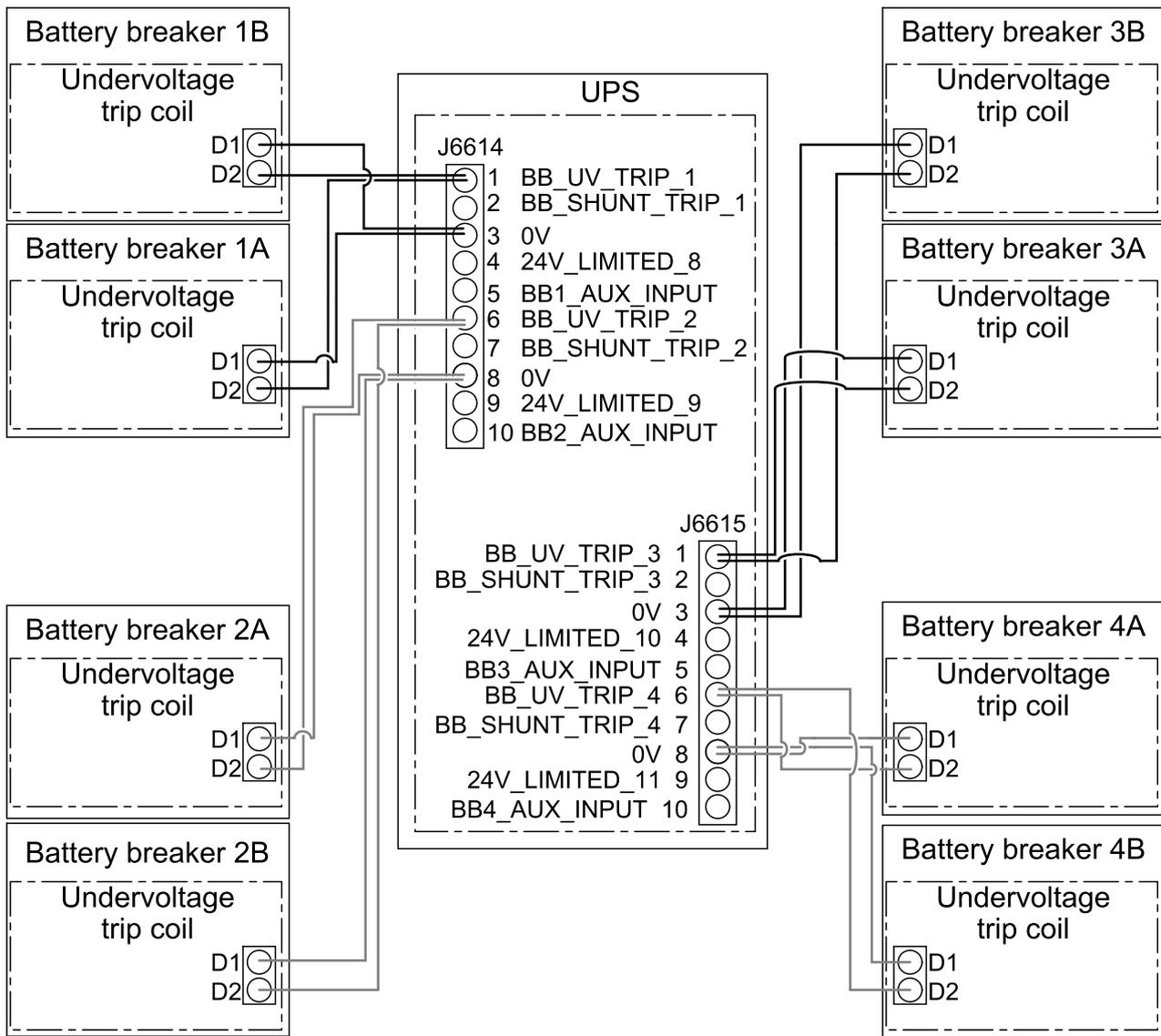
AUX Switch and Undervoltage Trip Coil Connections for Configuration with 1-4 Battery Breaker Boxes



AUX Switch Connections for Configuration with 5-8 Battery Breaker Boxes



Undervoltage Trip Coil Connections for Configuration with 5-8 Battery Breaker Boxes

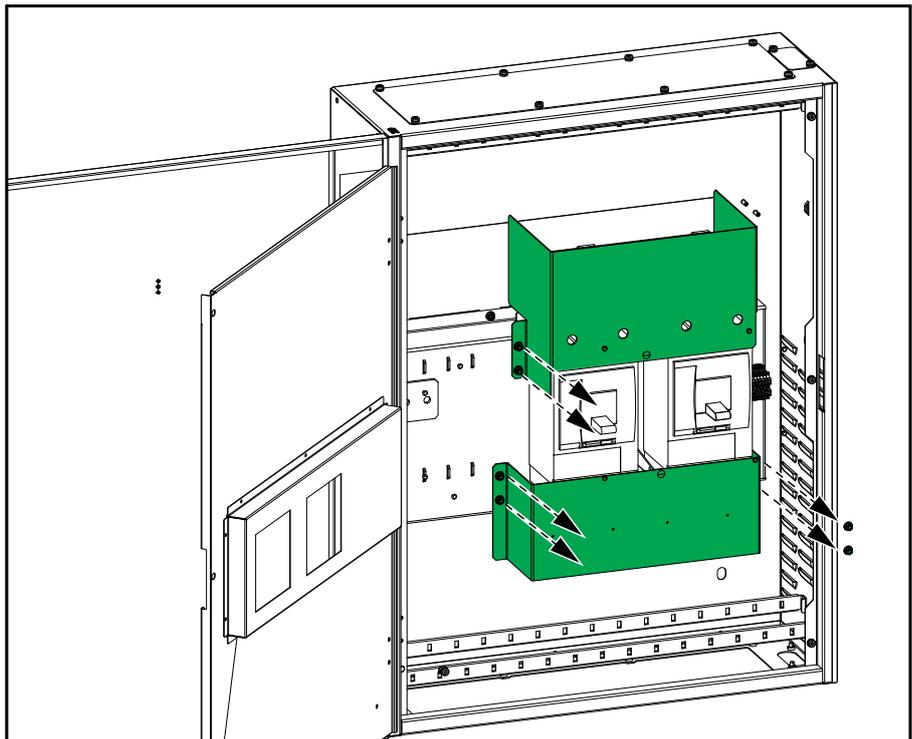


6. Reinstall the cover on the battery breaker.
7. Route the signal cables separately from the power cables.

Connect the Signal Cables for GVBBB630EL-2CB to the Galaxy VXL UPS

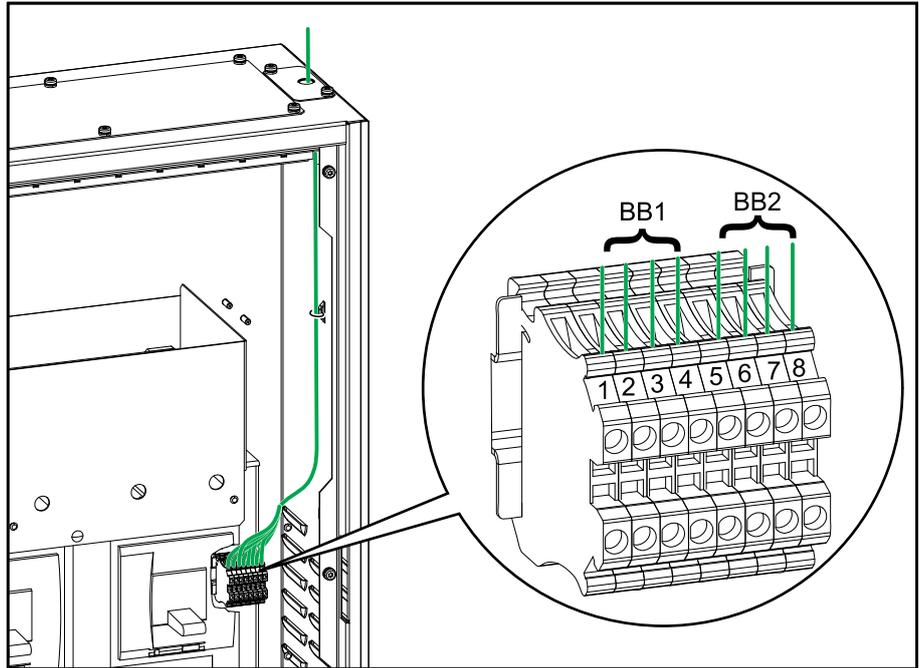
Recommended signal cable size	Maximum distance to the UPS
0.5 mm ²	50 meters
0.75 mm ²	100 meters
1.0 mm ²	200 meters

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.

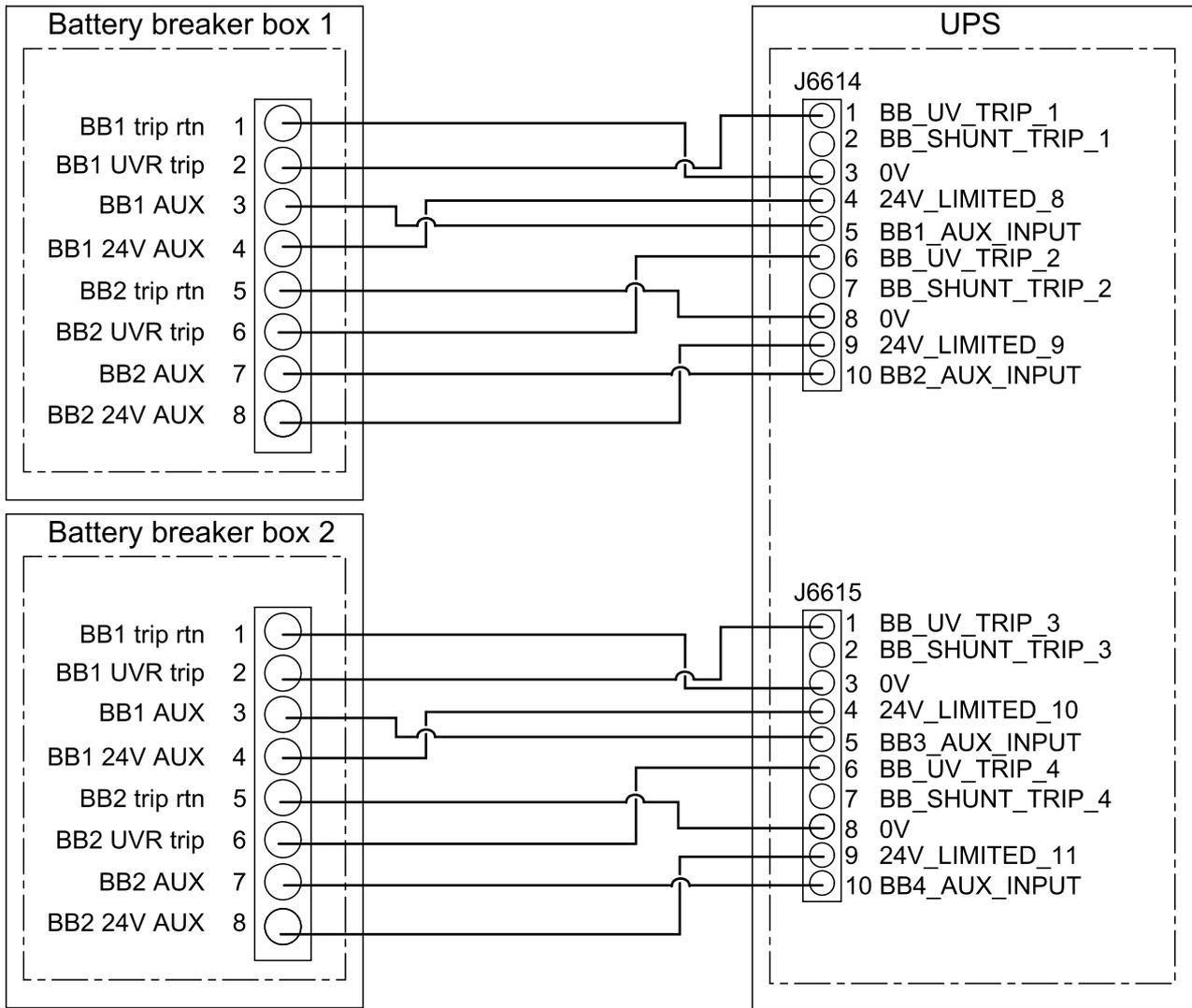


3. Route the signal cables through the top or bottom of the battery breaker box.

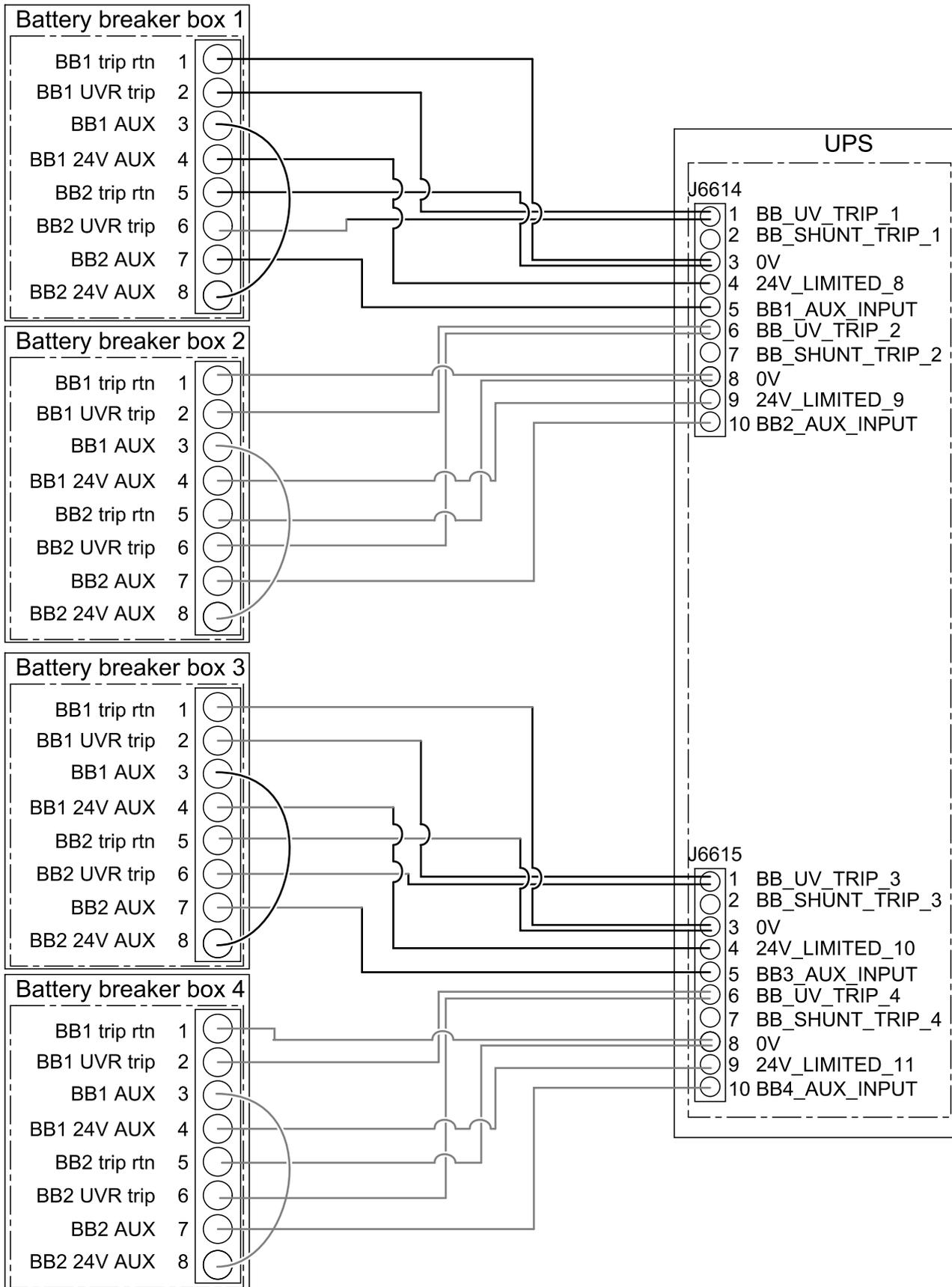
4. Connect the signal cables to the control terminal block:
 - a. Connect terminals 1-4 for battery breaker 1 (BB1).
 - b. Connect terminals 5-8 for battery breaker 2 (BB2).
 - c. Fasten the signal cables with cable ties (provided) to the cable relief.



Configuration with 1-2 Battery Breaker Boxes



Configuration with 3-4 Battery Breaker Boxes

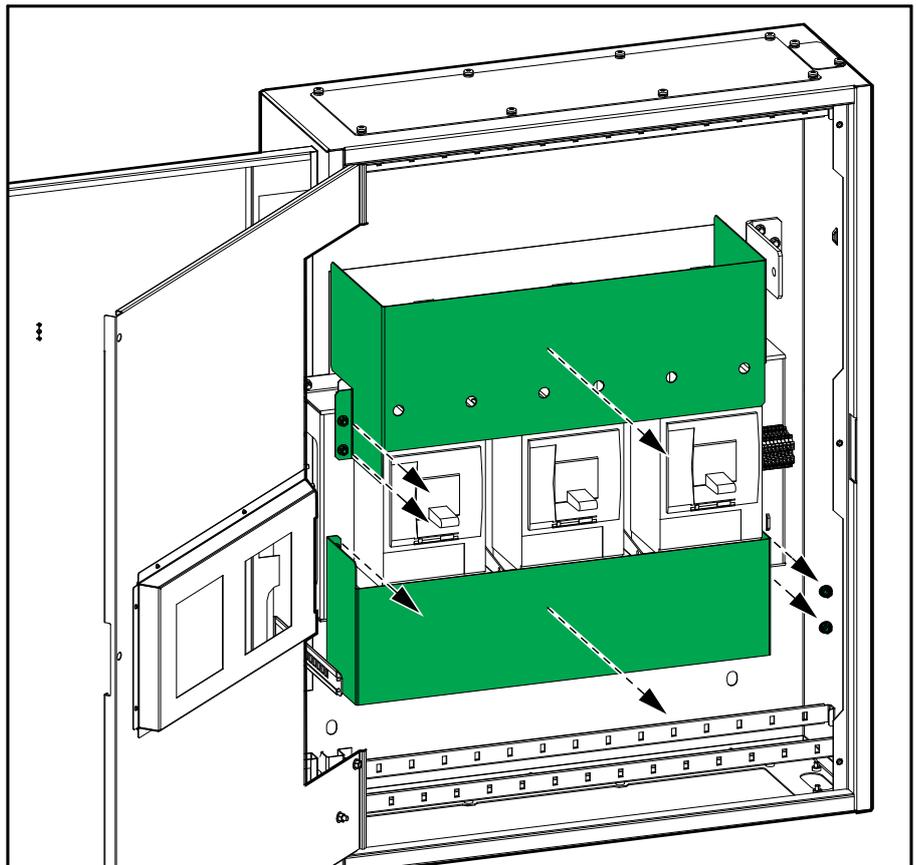


5. Route the signal cables separately from the power cables.

Connect the Signal Cables for GVBBB630EL-3CB to the Galaxy VXL UPS

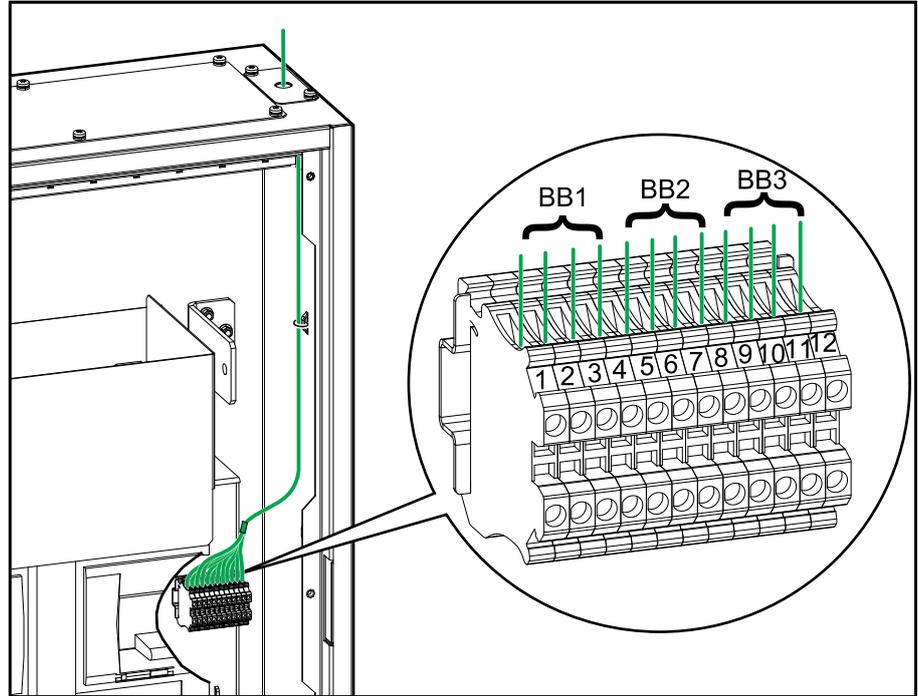
Recommended signal cable size	Maximum distance to the UPS
0.5 mm ²	50 meters
0.75 mm ²	100 meters
1.0 mm ²	200 meters

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.

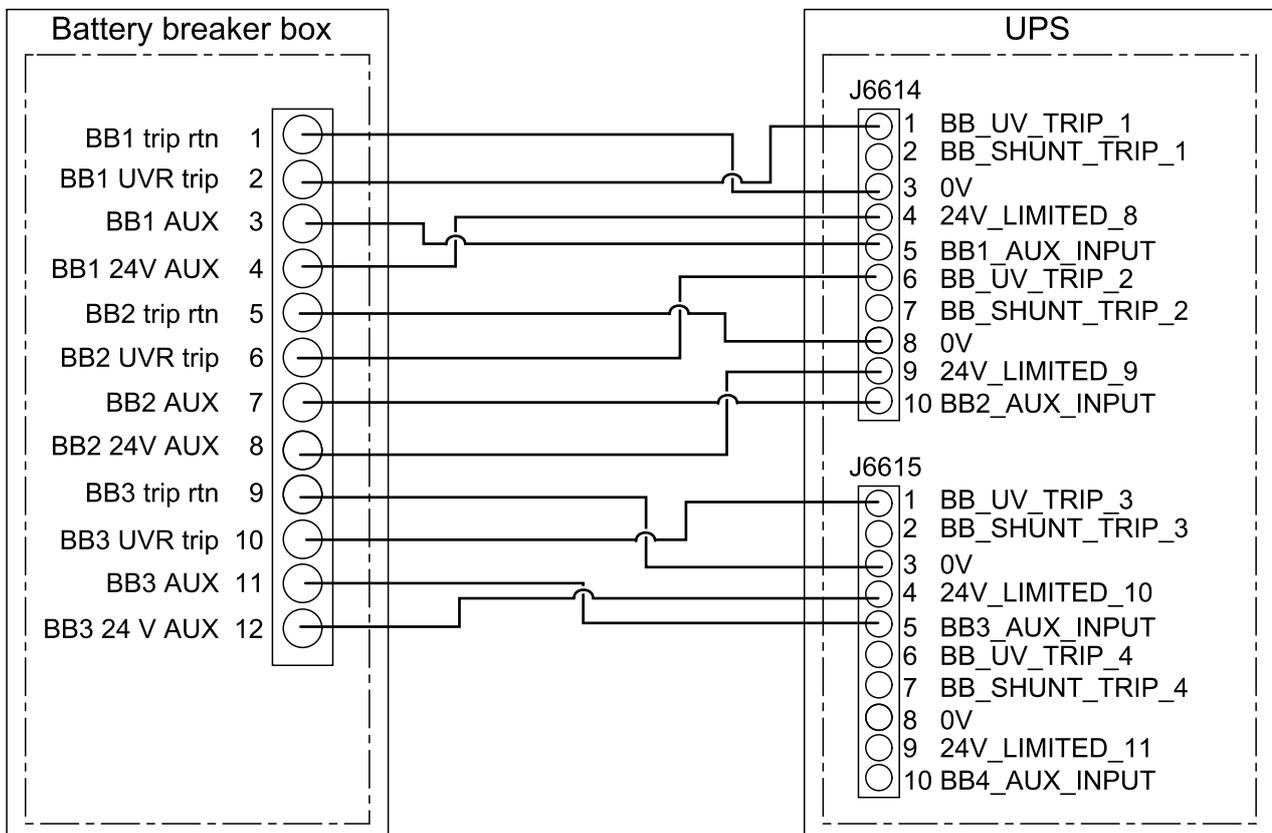


3. Route the signal cables through the top or bottom of the battery breaker box.

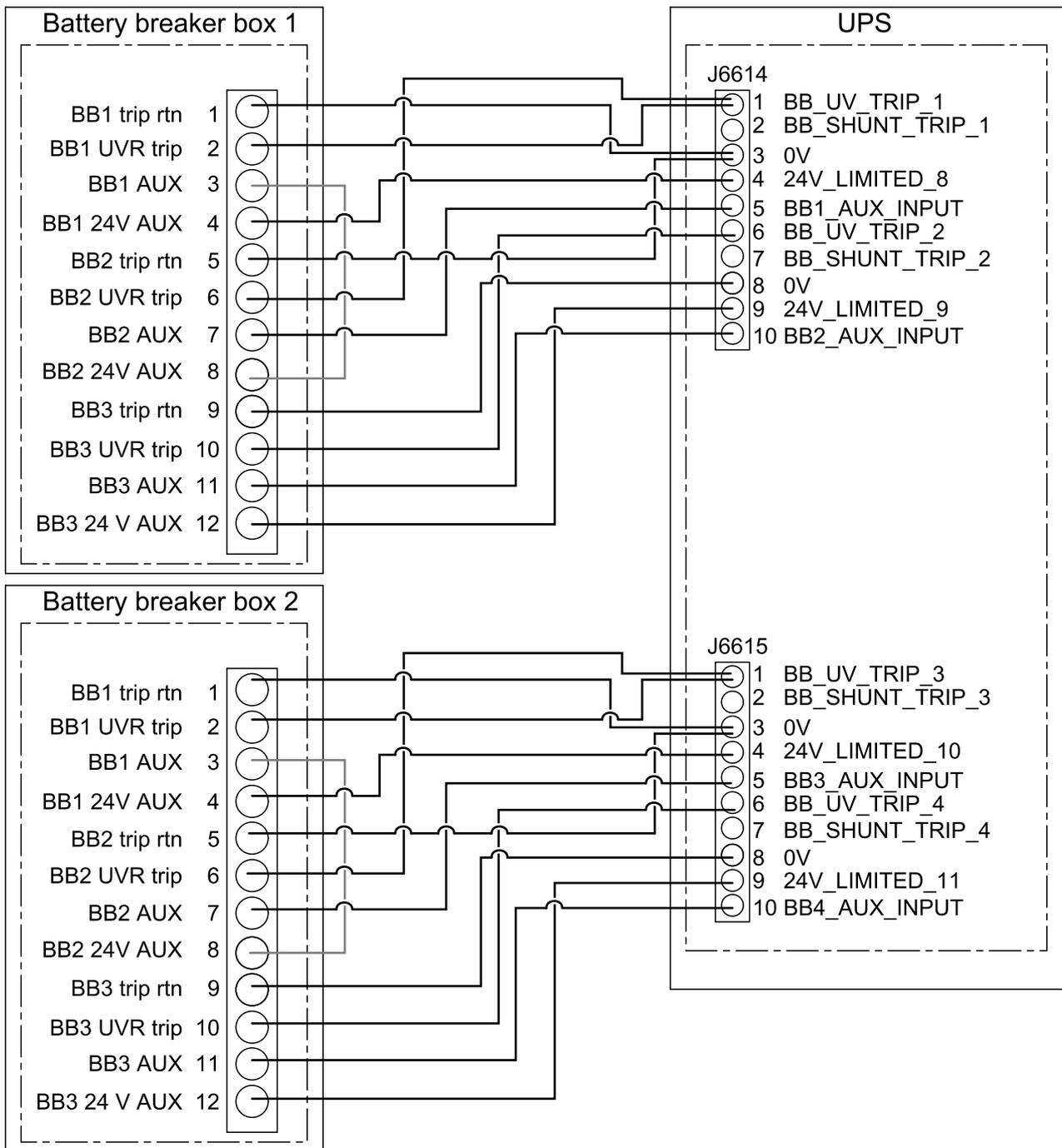
4. Connect the signal cables to the control terminal block:
 - a. Connect terminals 1-4 for battery breaker 1 (BB1).
 - b. Connect terminals 5-8 for battery breaker 2 (BB2).
 - c. Connect terminals 9-12 for battery breaker 3 (BB3).
 - d. Fasten the signal cables with cable ties (provided) to the cable relief.



Configuration with 1 Battery Breaker Box



Configuration with 2 Battery Breaker Boxes

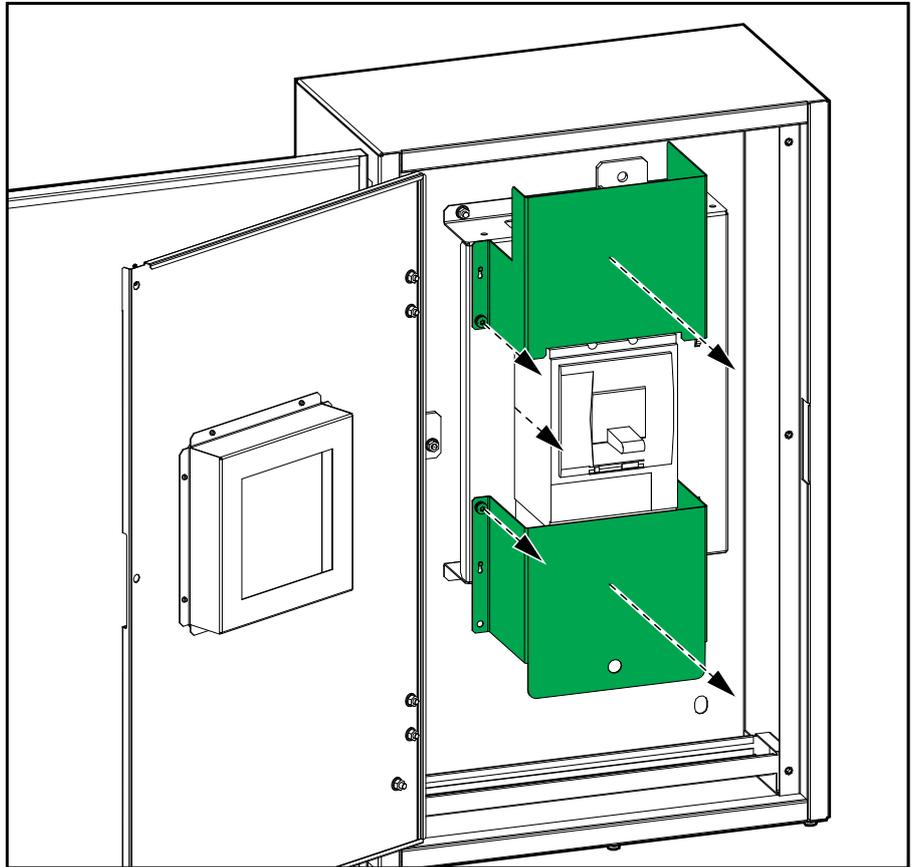


5. Route the signal cables separately from the power cables.

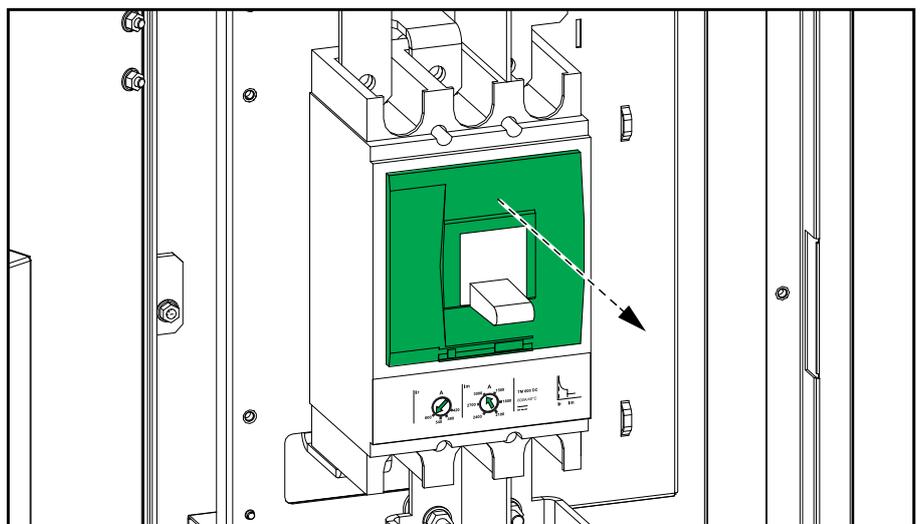
Connect the Signal Cables for GVBBB630EL-1CB to the Easy UPS 3-Phase Modular

NOTE: Recommended signal cable size is 0.5 mm².

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



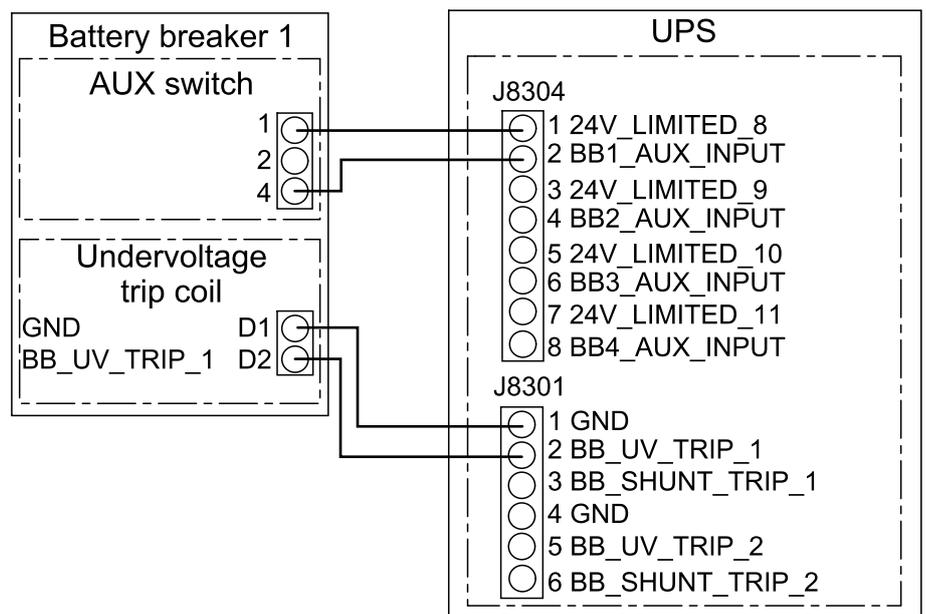
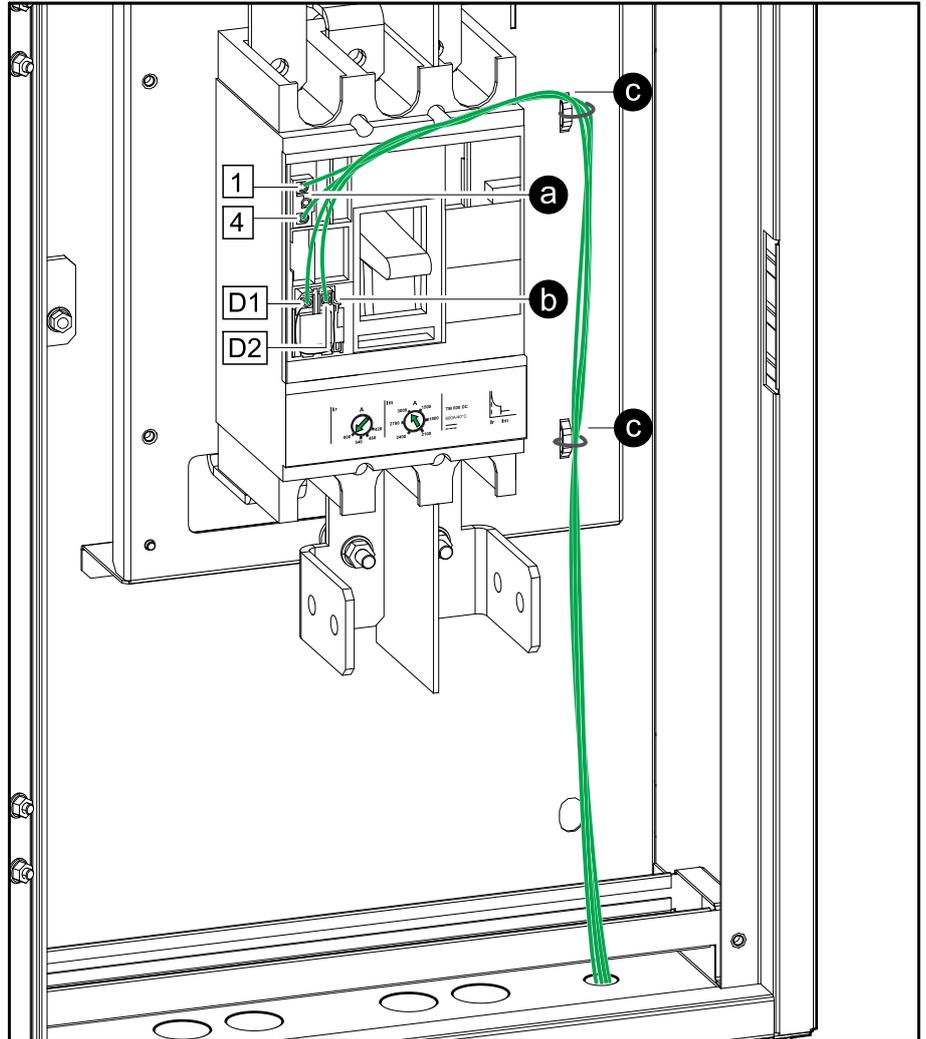
3. Remove the cover on the battery breaker.



4. Route the signal cables through the bottom of the battery breaker box.

5. Connect the signal cables:

- a. Connect the signal cables to the AUX switch.
- b. Connect the signal cables to the undervoltage trip coil.
- c. Fasten the signal cables with cable ties (provided) to the cable relief.

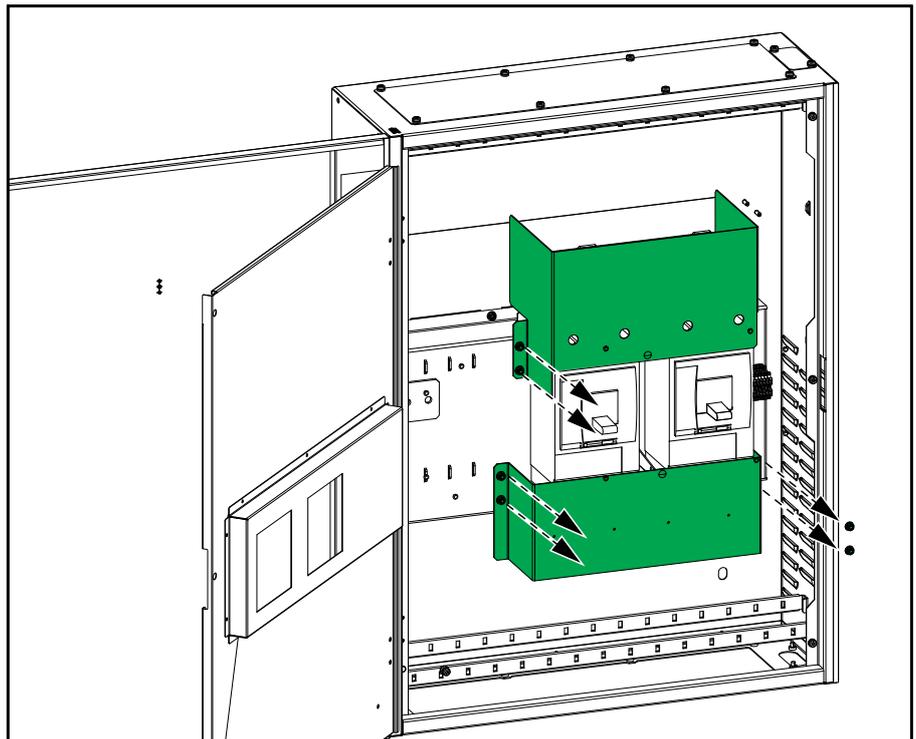


6. Reinstall the cover on the battery breaker.
7. Route the signal cables separately from the power cables.

Connect the Signal Cables for GVBBB630EL-2CB to the Easy UPS 3-Phase Modular

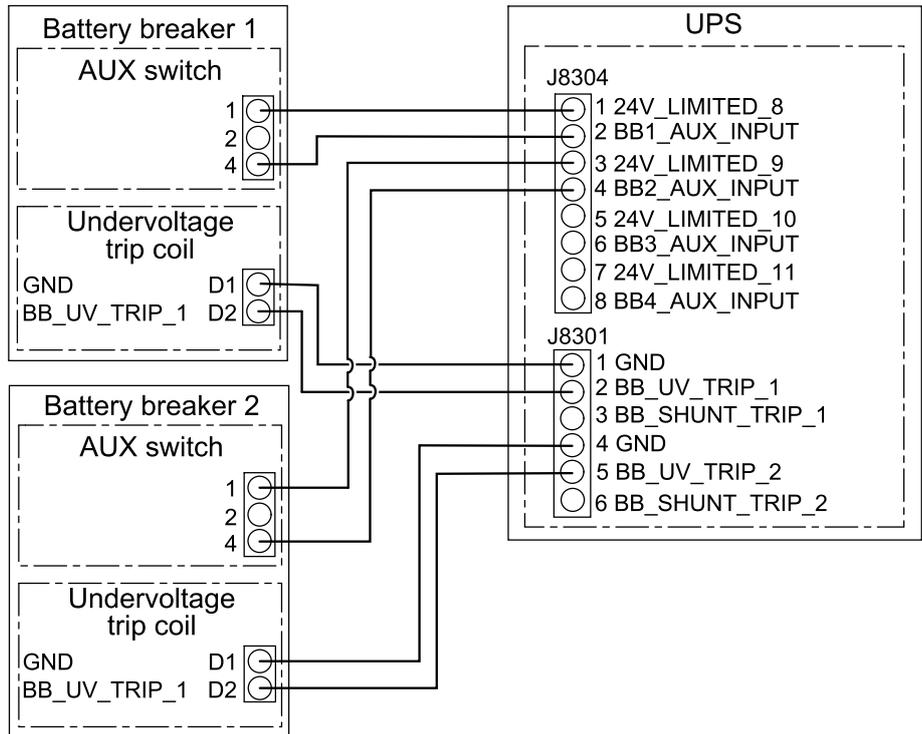
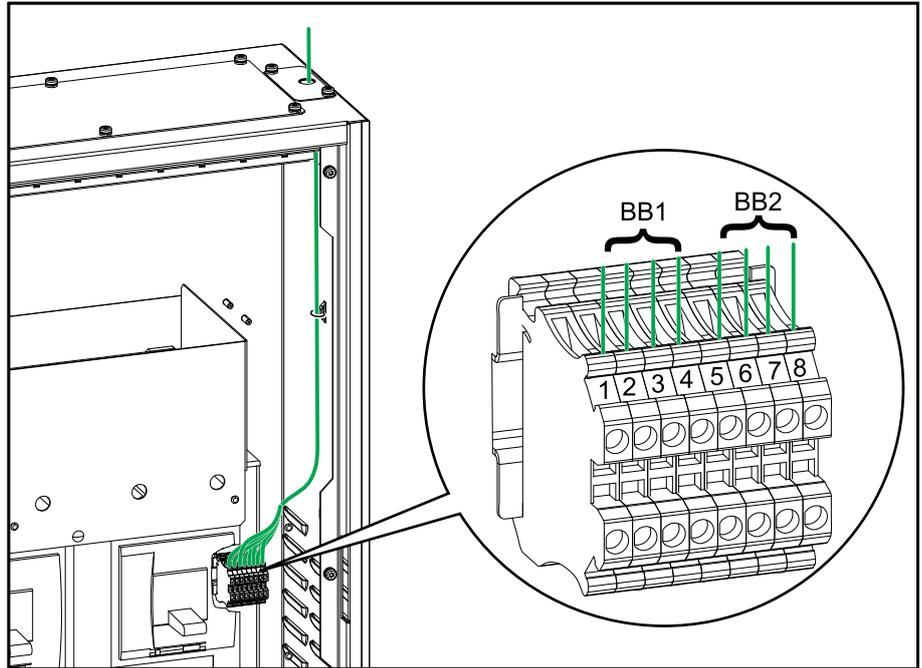
Recommended signal cable size	Maximum distance to the UPS
0.5 mm ²	50 meters
0.75 mm ²	100 meters
1.0 mm ²	200 meters

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



3. Route the signal cables through the top or bottom of the battery breaker box.

4. Connect the signal cables to the control terminal block:
 - a. Connect terminals 1-4 for battery breaker 1 (BB1).
 - b. Connect terminals 5-8 for battery breaker 2 (BB2).
 - c. Fasten the signal cables with cable ties (provided) to the cable relief.

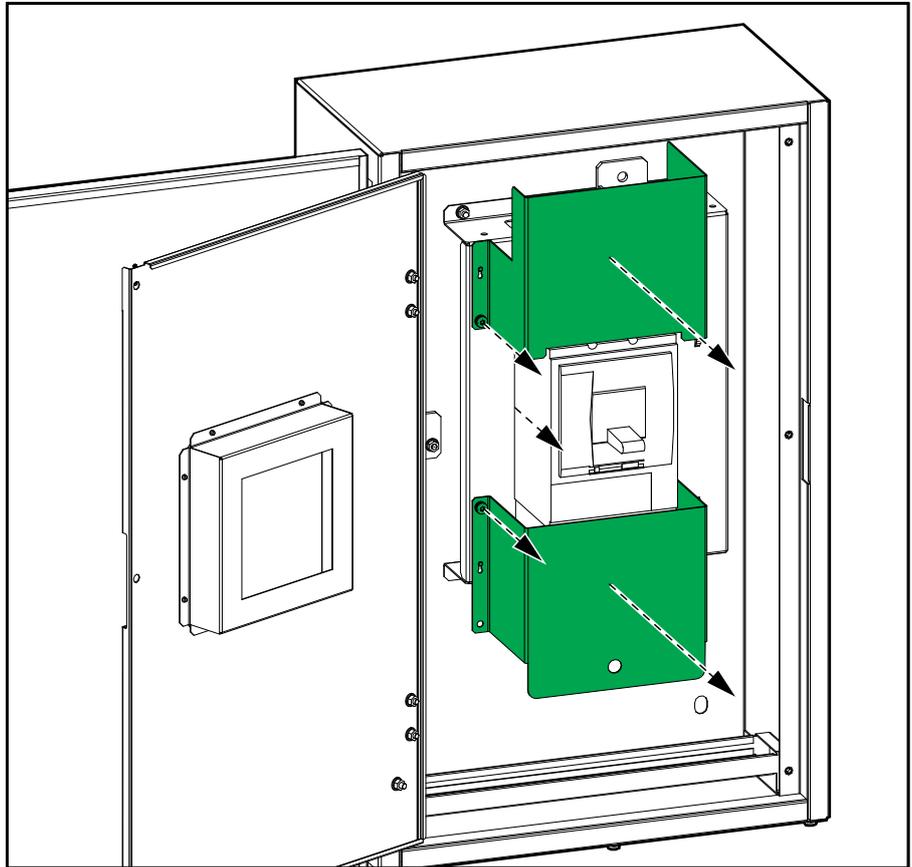


5. Route the signal cables separately from the power cables.

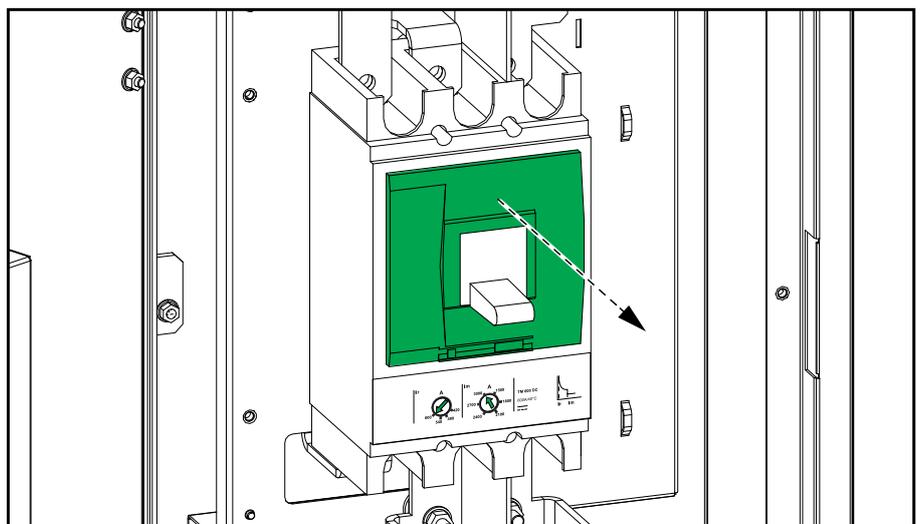
Connect the Signal Cables for GVBBB630EL-1CB to the Easy UPS 3M Advanced

NOTE: Recommended signal cable size is 0.5 mm².

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



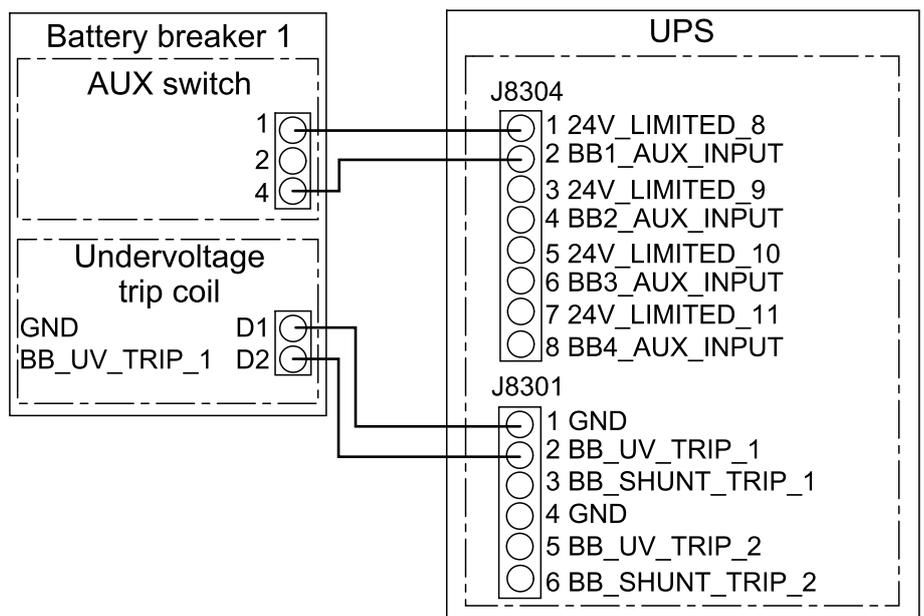
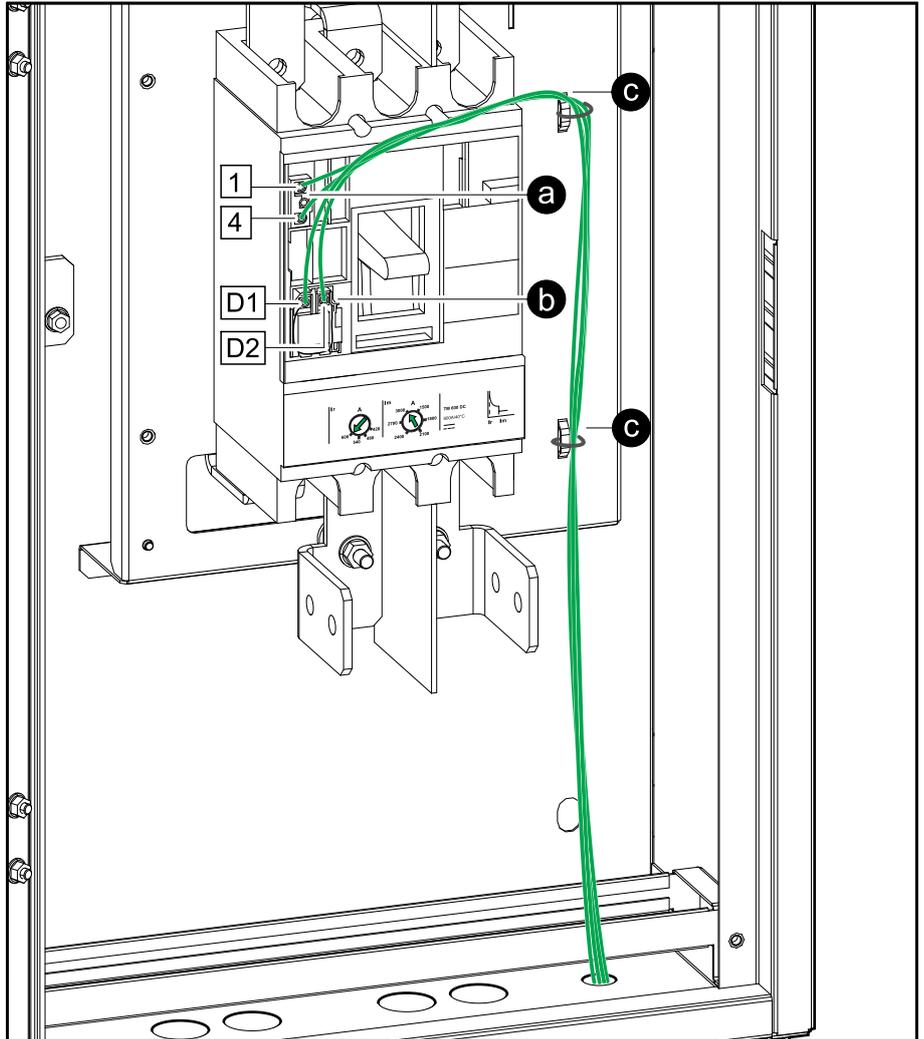
3. Remove the cover on the battery breaker.



4. Route the signal cables through the bottom of the battery breaker box.

5. Connect the signal cables:

- a. Connect the signal cables to the AUX switch.
- b. Connect the signal cables to the undervoltage trip coil.
- c. Fasten the signal cables with cable ties (provided) to the cable relief.



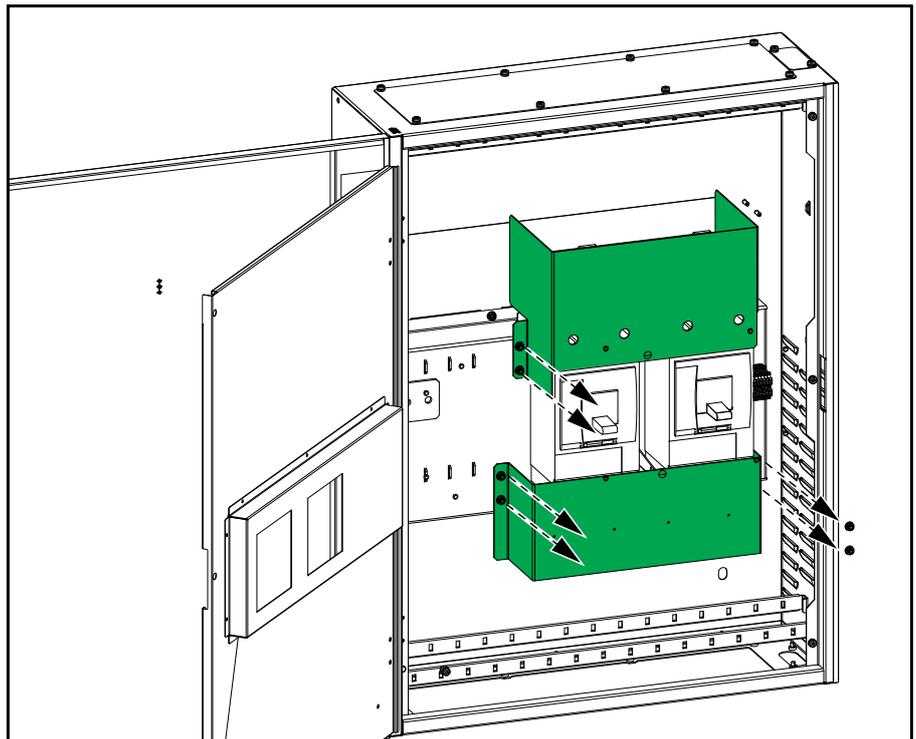
6. Reinstall the cover on the battery breaker.

7. Route the signal cables separately from the power cables.

Connect the Signal Cables for GVBBB630EL-2CB to the Easy UPS 3M Advanced

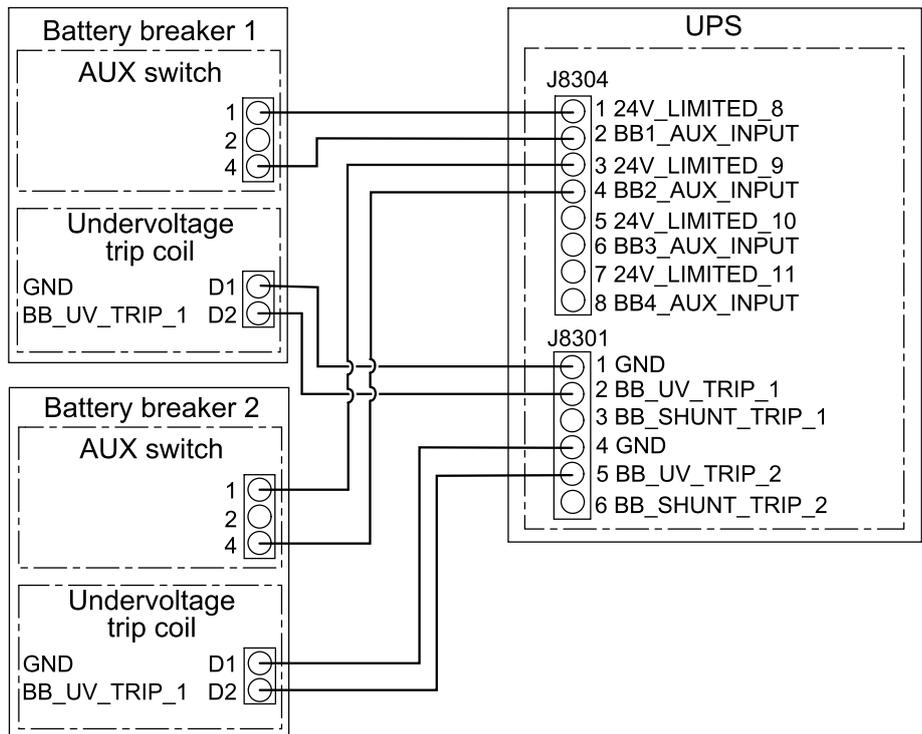
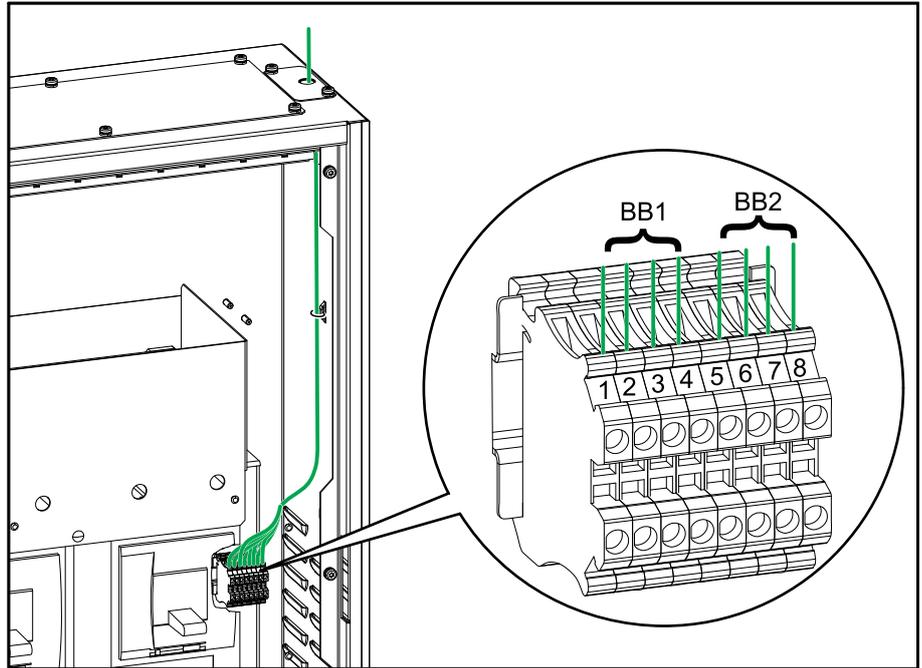
Recommended signal cable size	Maximum distance to the UPS
0.5 mm ²	50 meters
0.75 mm ²	100 meters
1.0 mm ²	200 meters

1. Lockout/Tagout the battery breaker.
2. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



3. Route the signal cables through the top or bottom of the battery breaker box.

4. Connect the signal cables to the control terminal block:
 - a. Connect terminals 1-4 for battery breaker 1 (BB1).
 - b. Connect terminals 5-8 for battery breaker 2 (BB2).
 - c. Fasten the signal cables with cable ties (provided) to the cable relief.



5. Route the signal cables separately from the power cables.

Connect the Power Cables

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Perform a total power off of the UPS system before connecting the battery cables to the battery breaker box.

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

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

For TT and TN systems each stand alone cabinet of the system must be individually connected to the protective earthing terminal in the distribution board that supplies the system.

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

WARNING

HAZARD OF ARC FLASH

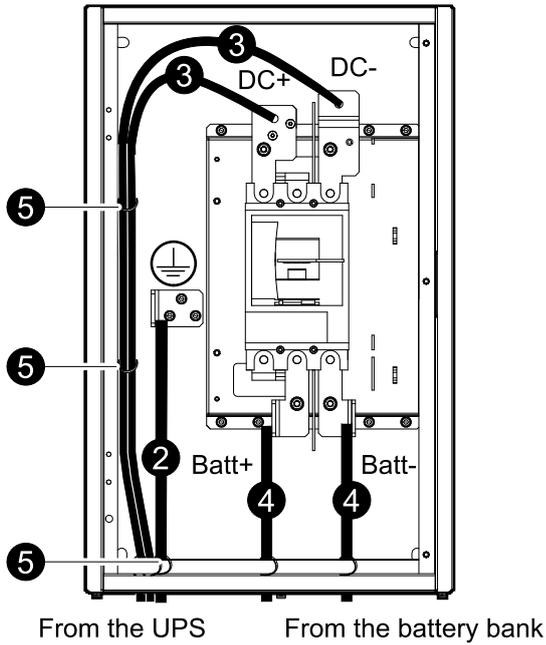
Use the provided M10 bolts and nuts to connect the power cables.

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

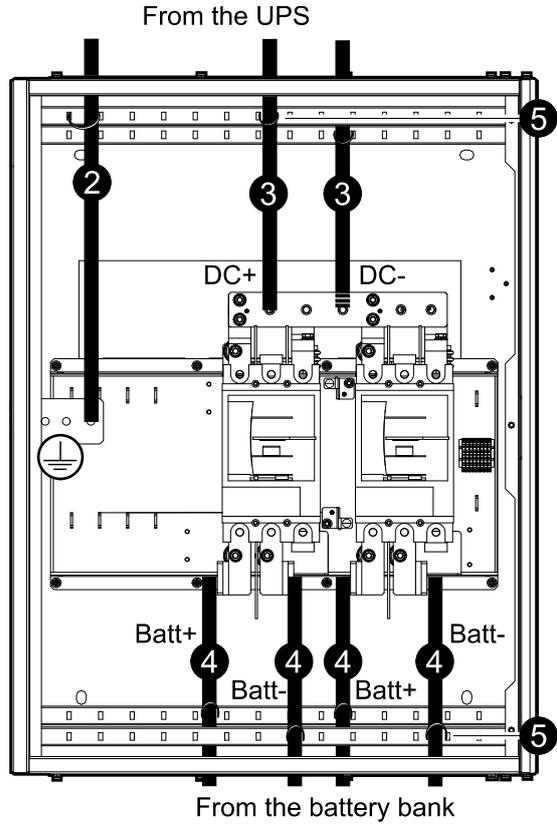
1. Lockout/Tagout the battery breaker.

- 2. Route the PE cables from the UPS into the battery breaker box as shown and connect.

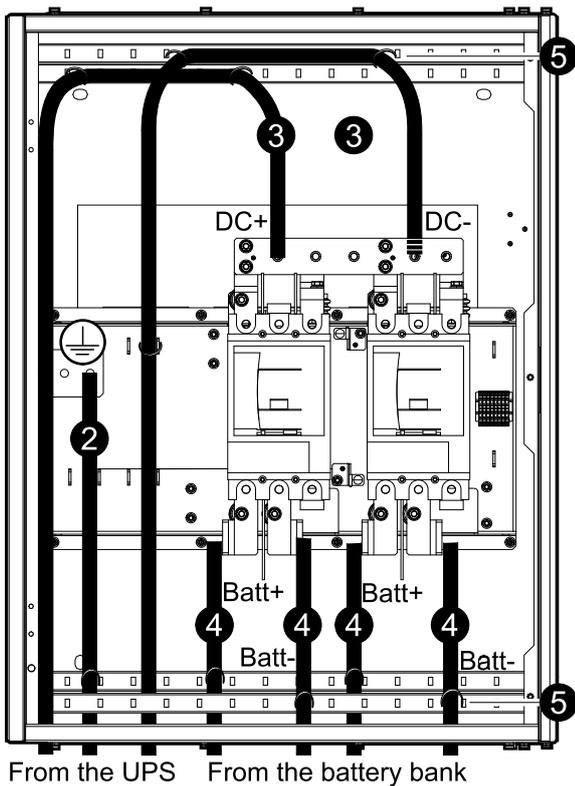
GVBBB630EL-1CB Bottom Cable Entry



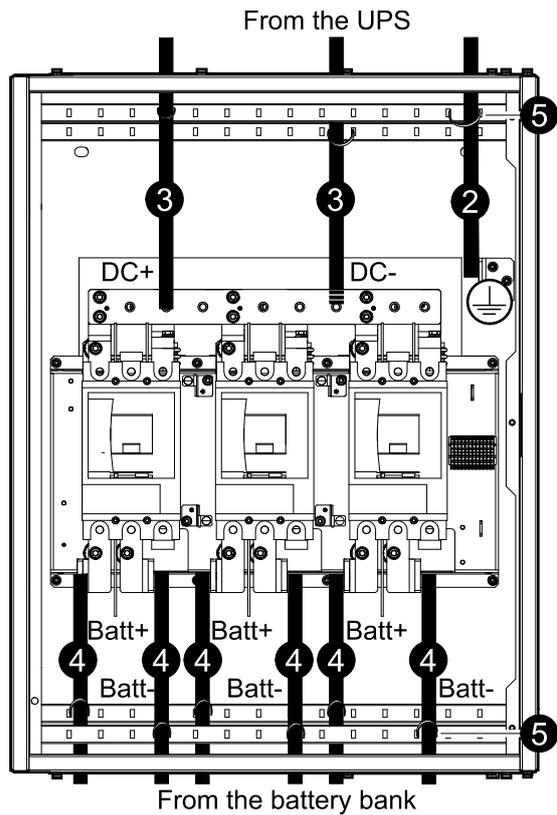
GVBBB630EL-2CB Top and Bottom Cable Entry



GVBBB630EL-2CB Bottom Cable Entry Only



GVBBB630EL-3CB Top and Bottom Cable Entry



3. Route the DC cables from the UPS into the battery breaker box as shown and connect.

<p style="text-align: center;">⚡ ⚠ DANGER</p> <p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH</p> <p>Reinstall the top protection cover on the battery breaker(s) before continuing with the installation.</p> <p>Failure to follow these instructions will result in death or serious injury.</p>
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4. Route the battery cables from the battery bank through the bottom of the battery breaker box and connect.

<p style="text-align: center;">⚡ ⚠ DANGER</p> <p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH</p> <ul style="list-style-type: none">• Reinstall the bottom protection cover on the battery breaker(s) before continuing with the installation.• Ensure correct polarity. <p>Failure to follow these instructions will result in death or serious injury.</p>

5. Attach the cables to the cables reliefs in the left side, the top, and the bottom of the battery breaker box.

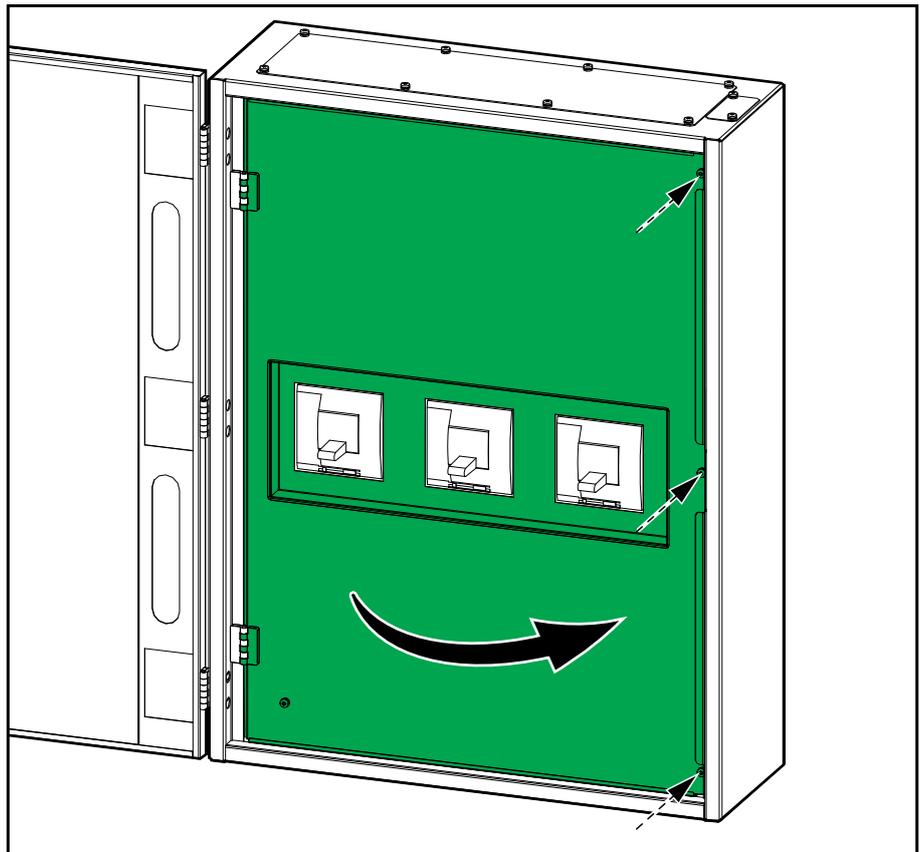
Add Translated Safety Labels to Your Product

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/TMExxxx 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/TMExxxx numbers.
4. Add the replacement safety label in your preferred language to your product on top of the existing French safety label.

Final Installation Steps

1. Close the inner door and fasten with the three screws.



2. Close the front door of the battery breaker box.

Decommission or Move the Battery Breaker Box to a New Location

1. Shut down the UPS completely – follow the instructions in the UPS operation manual.
2. Lockout/Tagout all breakers in the switchgear in the OFF (open) position.
3. Lockout/Tagout all battery breakers in the switchgear/battery solution in the OFF (open) position.
4. For battery solutions with no individual battery breaker upstream of this battery breaker box, disconnect the battery cables from the battery solution.

⚠️ DANGER

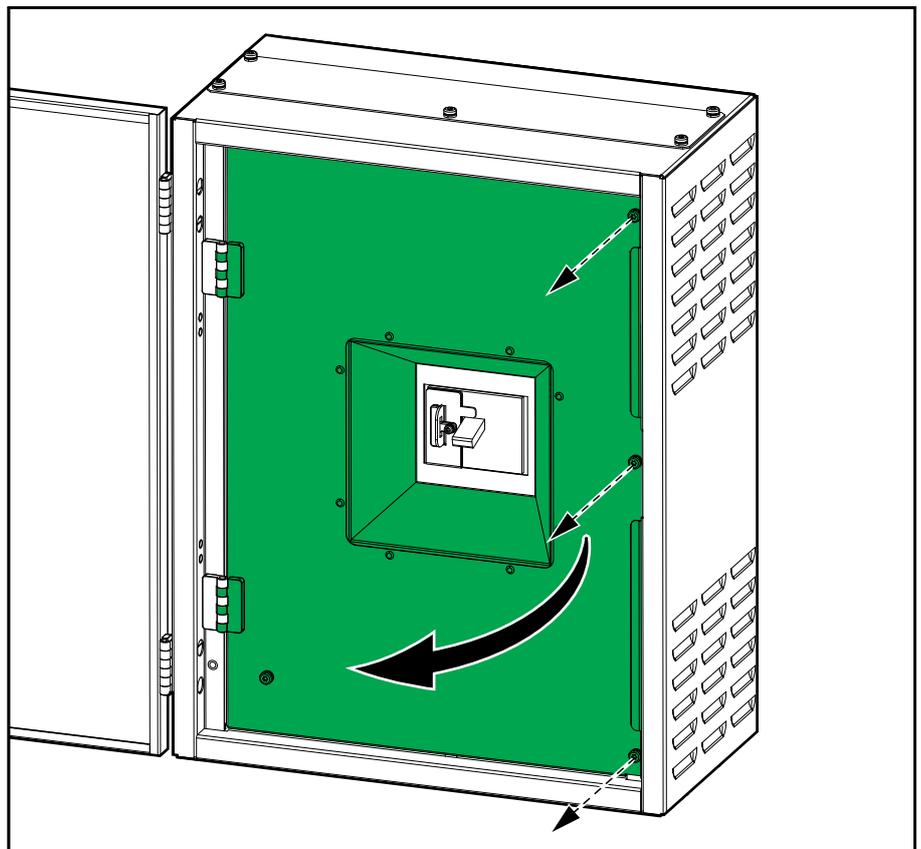
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Disconnect the battery cables from the battery solution.

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

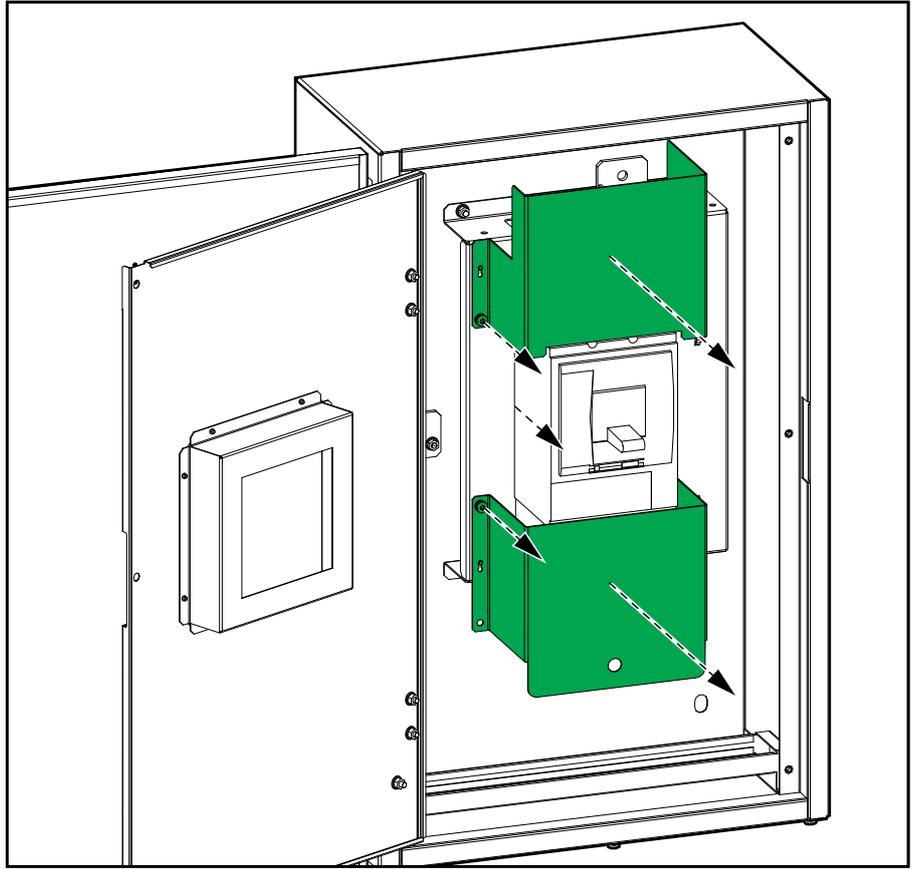
5. Open the front door of the battery breaker box.
6. Lockout/Tagout the battery breaker in the OFF (open) position.

Front View of Battery Breaker Box



7. Loosen the three screws and open the dead front panel.

8. Loosen the screws of the protection covers and lift the protection covers up and out of the battery breaker box.



9. Measure for and verify ABSENCE of voltage on each DC busbar before continuing.

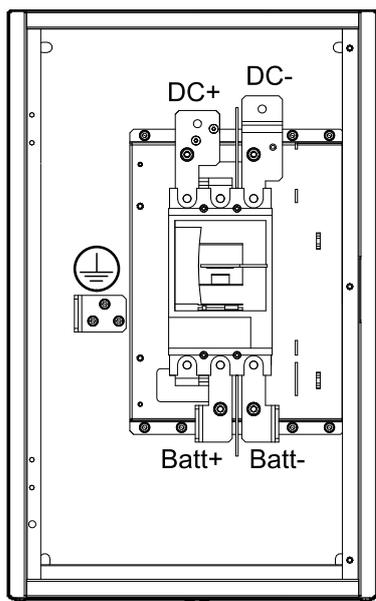
⚡ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

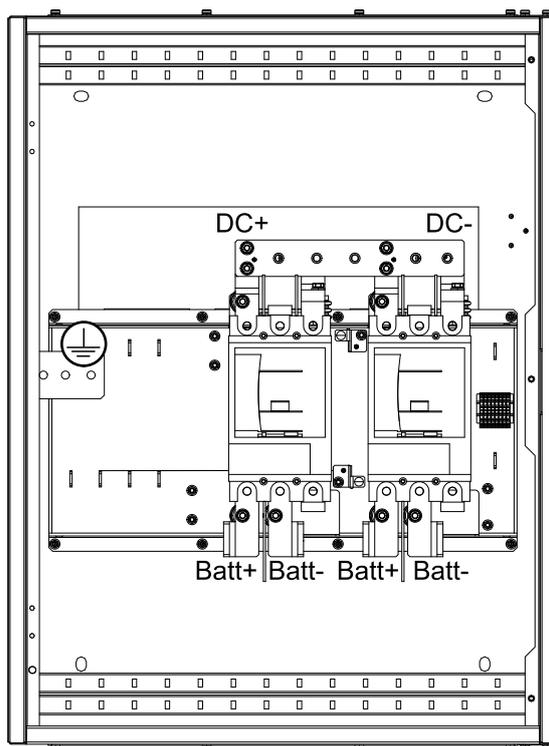
Measure for and verify ABSENCE of voltage on each DC busbar before continuing.

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

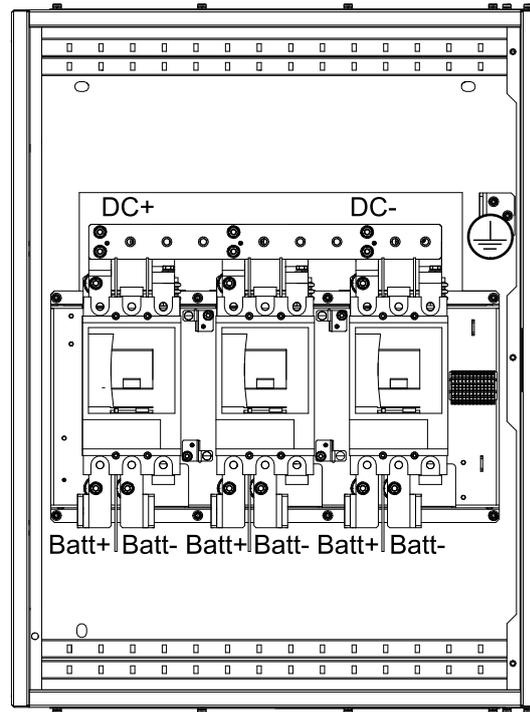
Front View of GVBBB630EL-1CB



Front View of GVBBB630EL-2CB



Front View of GVBBB630EL-3CB

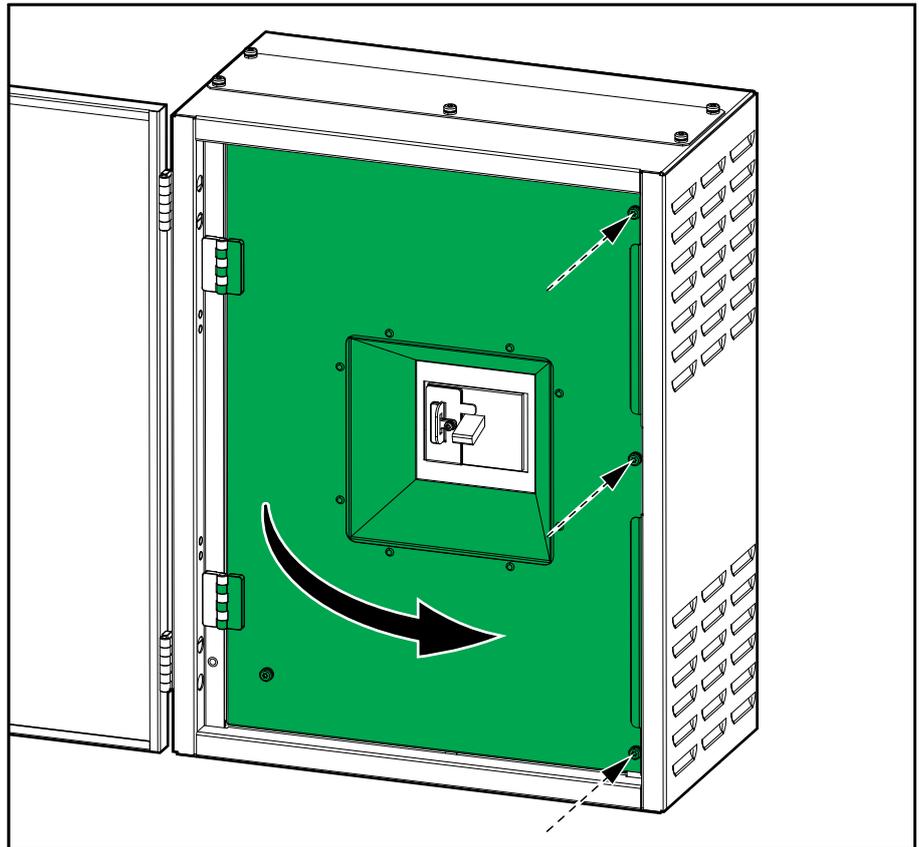


10. Disconnect and remove all power cables from the battery breaker box. See *Connect the Power Cables*, page 50 for details.
11. Disconnect and remove all signal cables from the battery breaker box. See the following chapters for details.
 - Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VS UPS, page 23 OR
 - Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VL UPS, page 25 OR
 - Connect the Signal Cables for GVBBB630EL-2CB and GVBBB630EL-3CB to the Galaxy VL UPS, page 27 OR
 - Connect the Signal Cables for GVBBB630EL-1CB to the Galaxy VXL UPS, page 30 OR
 - Connect the Signal Cables for GVBBB630EL-2CB to the Galaxy VXL UPS, page 35 OR
 - Connect the Signal Cables for GVBBB630EL-3CB to the Galaxy VXL UPS, page 39 OR
 - Connect the Signal Cables for GVBBB630EL-1CB to the Easy UPS 3-Phase Modular, page 42 OR
 - Connect the Signal Cables for GVBBB630EL-2CB to the Easy UPS 3-Phase Modular, page 44 OR
 - Connect the Signal Cables for GVBBB630EL-1CB to the Easy UPS 3M Advanced, page 46 OR
 - Connect the Signal Cables for GVBBB630EL-2CB to the Easy UPS 3M Advanced, page 48.
12. Reinstall the inner covers.

13. Remove the four M10 screws from the wall and remove the battery breaker box from the wall.

⚠ CAUTION
HEAVY LOAD
The battery breaker box is heavy. GVBBB630EL-1CB weighs 35 kg, GVBBB630EL-2CB weighs 66 kg, and GVBBB630EL-3CB weighs 76 kg. Use appropriate tools to safely lift the battery breaker box.
Failure to follow these instructions can result in injury or equipment damage.

14. Close the dead front panel and fasten with the three screws.



15. Close and lock the front door of the battery breaker box.

16. **For transport:**

⚠ WARNING
<p>TIPPING HAZARD</p> <p>For transport of the battery breaker box ensure:</p> <ul style="list-style-type: none">• that personnel performing the transport have necessary skills and have received adequate training;• to use appropriate tools to safely lift and transport the product;• to protect the product against damage by using appropriate protection (like wrapping or packaging). <p>Failure to follow these instructions can result in death, serious injury, or equipment damage.</p>

Transportation requirements:

- Mount the battery breaker box in a horizontal position in the center of a suitable pallet with minimum pallet dimensions: 840 mm x 1220 mm. The pallet must be suitable for the weight of the battery breaker box. GVBBB630EL-1CB weighs 35 kg, GVBBB630EL-2CB weighs 66 kg, and GVBBB630EL-3CB weighs 76 kg.
- Mount the battery breaker box to the pallet with appropriate means of fixation that can withstand vibrations and shocks during loading, transport, and unloading.
- The original shipping pallet in combination with the original transportation brackets can be reused, if in undamaged condition.

⚠ WARNING
<p>UNEXPECTED EQUIPMENT BEHAVIOR</p> <p>Do not lift the battery breaker box with a forklift/pallet truck directly on the frame as it may bend or damage the battery breaker box.</p> <p>Failure to follow these instructions can result in death, serious injury, or equipment damage.</p>

17. Perform one of the following:

- Decommission the battery breaker box, OR
- Move the battery breaker box to a new location to install it.

18. **Only for installing the battery breaker box in a new location:** Follow the installation manual to install the battery breaker box in the new location. See *Installation Procedure*, page 18 for installation overview. Reinstallation and startup must only be performed by qualified personnel.

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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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