

# MGE EPS 8000

555–800 kVA 480 – 600 V

## Installation

Integrated Parallel UPS

11/2015



# Legal Information

The Schneider Electric brand and any registered trademarks of Schneider Electric Industries SAS referred to in this guide are the sole property of Schneider Electric SA and its subsidiaries. They may not be used for any purpose without the owner's permission, given in writing. This guide and its content are protected, within the meaning of the French intellectual property code (Code de la propriété intellectuelle français, referred to hereafter as "the Code"), under the laws of copyright covering texts, drawings and models, as well as by trademark law. You agree not to reproduce, other than for your own personal, noncommercial use as defined in the Code, all or part of this guide on any medium whatsoever without Schneider Electric's permission, given in writing. You also agree not to establish any hypertext links to this guide or its content. Schneider Electric does not grant any right or license for the personal and noncommercial use of the guide or its content, except for a non-exclusive license to consult it on an "as is" basis, at your own risk. All other rights are reserved.

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.

# Table of Contents

Important Safety Information .....	5
Safety Precautions .....	6
Electrical Safety .....	8
Battery Safety .....	9
Specifications .....	11
Input Specifications for 555–800 kVA Systems .....	11
Bypass Specifications for 555–800 kVA Systems .....	12
Output Specifications for 555–800 kVA Systems .....	13
Battery Specifications for 555–800 kVA Systems .....	14
Recommended Cable Sizes for 555–800 kVA Systems .....	15
Torque Specifications .....	15
Mechanical Assembly .....	16
Remove the Rear Shipping Bolts .....	16
Level the Cabinets .....	17
Prepare for Installation .....	18
Install Seismic Anchoring .....	18
Interconnect the Cabinets .....	25
Connect the Power Cables .....	27
Overview of Cables .....	27
Prepare for Cables .....	28
Connect the Input Cables .....	29
Connect the Output Cables .....	30
Connect the Battery Cables .....	30
Connect the Signal Cables .....	31
Connect the Battery Communication Cables .....	31
Overview of Printed Circuit Boards .....	31
Connect the Control Cables .....	32
Connect Dry Contacts .....	33
Dry Contact Information .....	33
IBEZ Board Information .....	34
OBEZ Board Information .....	34
Connect Remote EPO .....	35
Connect the Temperature Monitor .....	35
IBEZ Board XR4 Information .....	35
Connect Telecommunication .....	36
RAUZ Information .....	36
Route the Signal Cables .....	36





# Important Safety Information

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**

All safety instructions in this document must be read, understood and followed.

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

### **⚠ DANGER**

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

Read all instructions in the Installation Manual before installing or working on this 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 install the UPS system 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.
- After the UPS system has been electrically wired, do not start up the system. Startup must only be performed by Schneider Electric.

**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 UPS system in a temperature controlled indoor environment free of conductive contaminants and humidity.
- Install the UPS system 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 UPS 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.**

**⚠ WARNING****HAZARD OF OVERHEATING**

Respect the space requirements around the UPS system and do not cover the product's ventilation openings when the UPS system is in operation.

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

**⚠ WARNING****HAZARD OF EQUIPMENT DAMAGE**

Do not connect the UPS output to regenerative load systems including photovoltaic systems and speed drives.

**Failure to follow these instructions can result in death, serious injury, or 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.
- The UPS system must be installed in a room with restricted access (qualified personnel only).
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- Turn off all power supplying the UPS system before working on or inside the equipment.
- Before working on the UPS system, check for hazardous voltage between all terminals including the protective earth.
- The UPS contains an internal energy source. Hazardous voltage can be present even when disconnected from the utility/mains supply. Before installing or servicing the UPS system, ensure that the units are OFF and that utility/mains and batteries are disconnected. Wait five minutes before opening the UPS to allow the capacitors to discharge.
- A disconnection device (e.g. disconnection circuit breaker or switch) must be installed to enable isolation of the system from upstream power sources in accordance with local regulations. This disconnection device must be easily accessible and visible.
- The UPS must be properly earthed/grounded and due to a high leakage current, the earthing/grounding conductor must be connected first.

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

**⚠ 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 UL 1778 4th 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.

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

**⚠ CAUTION****RISK OF EQUIPMENT DAMAGE**

- 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

## Input Specifications for 555–800 kVA Systems

	555 kVA/500 kW		625 kVA/562 kW		750 kVA/675 kW		800 kVA/720 kW	
	480 V	600 V	480 V	600 V	480 V	600 V	480 V	600 V
Connections	3PH + G							
Input voltage (V)	480 +10/-15%							
Input frequency (Hz)	60							
THDI	Less than 5% at full load							
Nominal input current (A) <sup>1</sup>	719	575	817	654	1034	725	1103	866
Maximum input current (A) <sup>2</sup>	825	678	923	757	1126	832	1195	989
Input current limitation and Q1 rating (A) <sup>3</sup>	1200				1600			
Maximum short circuit withstand current (kAIC)	65 <sup>4</sup>							
Rectifier input fuses	700 A/600 VAC, 4 PLS Fast				1 KA/600 VAC, 4 PLS Fast			
DC bus/ inverter input fuses	700 A/600 VAC, 4 PLS Fast				1.0 KA 550 VAC, 4 PLS Fast			

1. Input current based on rated load and batteries fully charged.
2. Input current based on full battery recharge current, nominal voltage, and rated load.
3. Set for 150% nominal input current. Programmable up to input circuit breaker rating.
4. consult factory for 100 KAIC

## Bypass Specifications for 555–800 kVA Systems

	555 kVA/500 kW		625 kVA/562 kW		750 kVA/675 kW		800 kVA/720 kW	
	480 V	600 V	480 V	600 V	480 V	600 V	480 V	600 V
Connections	3PH + N + G							
Input frequency (Hz)	60							
Nominal bypass current (A)	668	534	752	601	900	722	960	770
Q4S circuit breaker rating (A)	1000				1200			



## Output Specifications for 555–800 kVA Systems

	555 kVA/500 kW		625 kVA/562 kW		750 kVA/675 kW		800 kVA/720 kW	
Nominal output voltage (V)	480	600	480	600	480	600	480	600
Connections	3PH + N + G							
Output voltage range	480 V $\pm$ 5% (adjustable)							
Overload capacity	10 minutes at 125% load 60 seconds at 150% load							
Nominal output current (A)	668	534	752	601	900	722	960	770
Output frequency (sync to mains) (Hz)	60							
Slew rate	1.0 Hz/Sec – Programmable 0.5 to 2 Hz/Sec.							
THDU (phase to phase)	2%							
Output power factor	0.9							
Dynamic load at full load response	$\pm$ 5%							
Output voltage regulation (RMS)	$\pm$ 1% for 100% balanced loads, $\pm$ 2% for 100% unbalanced loads							
Q5N output circuit breaker ratings (A)	1000				1200			
Output inverter load fuses	1.250 KA 600 V Fast				1.40 KA 650 V Fast			

## Battery Specifications for 555–800 kVA Systems

	555 kVA/500 kW	625 kVA/562 kW	750 kVA/675 kW	800 kVA/720 kW
Type	VRLA or Vented Lead Acid			
Nominal voltage (VDC)	480			
Float voltage (VDC) <sup>5</sup>	545			
End of discharge voltage (VDC) <sup>5</sup>	400			
End voltage	1.67 V/Cell			
Battery current at full load and 480 VDC (A)	1106	1245	1495	1596
Maximum current at 400 VDC (end of discharge) (A)	1301	1465	1766	1884
Maximum charging power at full load (kW)	50	56	67	72
Typical re-charge time	C10			

---

5. Programmable – contact Schneider Electric for more information

## Recommended Cable Sizes for 555–800 kVA Systems

### DANGER

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

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

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

Cable sizes in this manual are based on table 310-16 of the National Electrical Code (NEC) with the following assertions:

- 75°C conductors for 75°C termination
- Use of copper conductors

Ground wires are sized in accordance with NEC Article 250-122 and Table 250-122.

Power and control cables must be routed in separate conduits.

Upstream and downstream bypass cable type and lengths must be equal for all UPSs installed in each integrated parallel system.

	555 kVA/500 kW	625 kVA/562 kW	750 kVA/675 kW	800 kVA/720 kW
Input	350 MCM x 5	350 MCM x 5	500 MCM x 6	500 MCM x 6
Bypass	350 MCM x 4	350 MCM x 4	500 MCM x 4	500 MCM x 4
Output	350 MCM x 4	350 MCM x 4	500 MCM x 4	500 MCM x 4
Battery	500 MCM x 5	500 MCM x 5	500 MCM x 6	500 MCM x 6

## Torque Specifications

Bolt size	Torque
3/8	39.54 Nm (350 lb-in)

# Mechanical Assembly

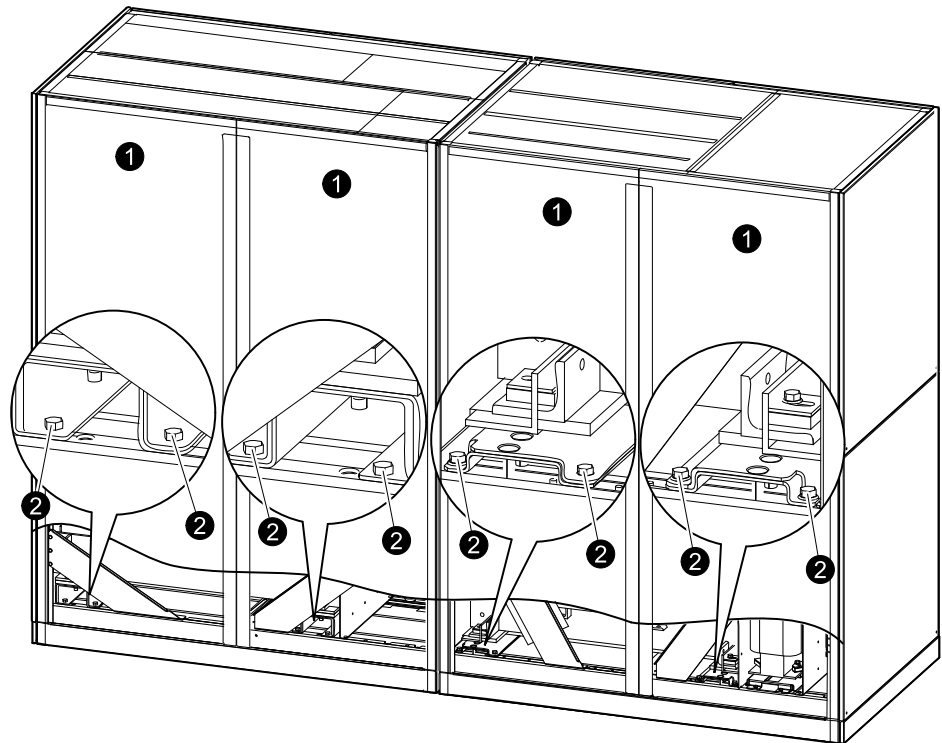
## Remove the Rear Shipping Bolts

**NOTE:** When the UPS cabinets are installed against a wall or against another cabinet, you must remove the shipping bolts.

**NOTE:** Do not remove the shipping bolts when seismic provisions of IBC2006 and ICC ES AC156 are required.

1. Remove the four rear covers of UPS cabinet 1 and UPS cabinet 2.
2. From the rear, remove the eight shipping bolts.

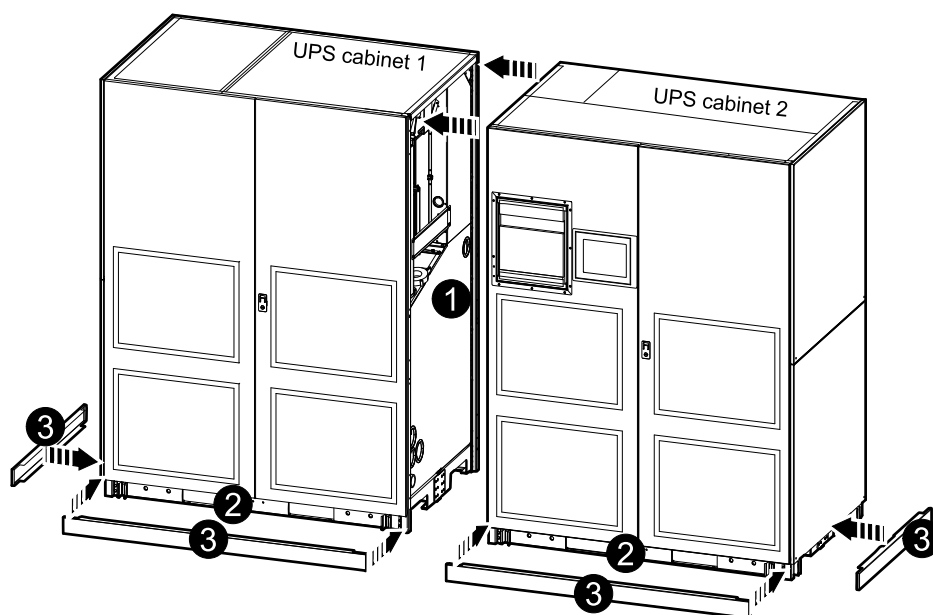
### Rear View of UPS Cabinets 1 and 2.



3. Reinstall the four rear covers.

## Level the Cabinets

1. Move the cabinets together.
2. Level the cabinets with leveling shims (not provided).
3. Install the provided kickplates.



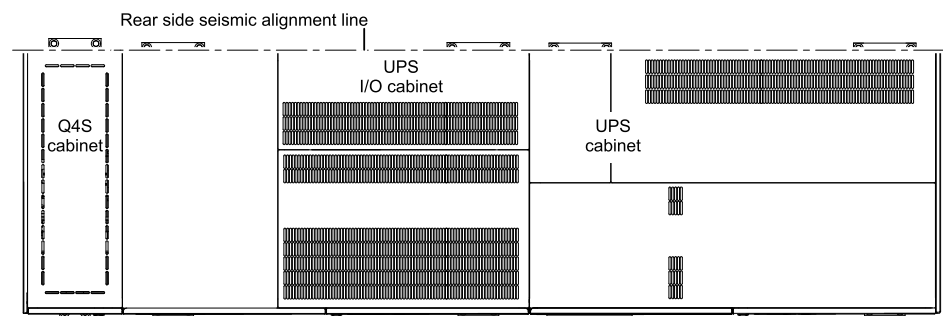
# Prepare for Installation

## Install Seismic Anchoring

**NOTE:** The structural engineer or design engineer of record is responsible for detailing the equipment anchorage requirements for the given installation. The installer and manufacturers of the anchorage system are responsible for assuring that the mounting requirements are met. Schneider Electric is not responsible for the specification and performance of anchorage systems.

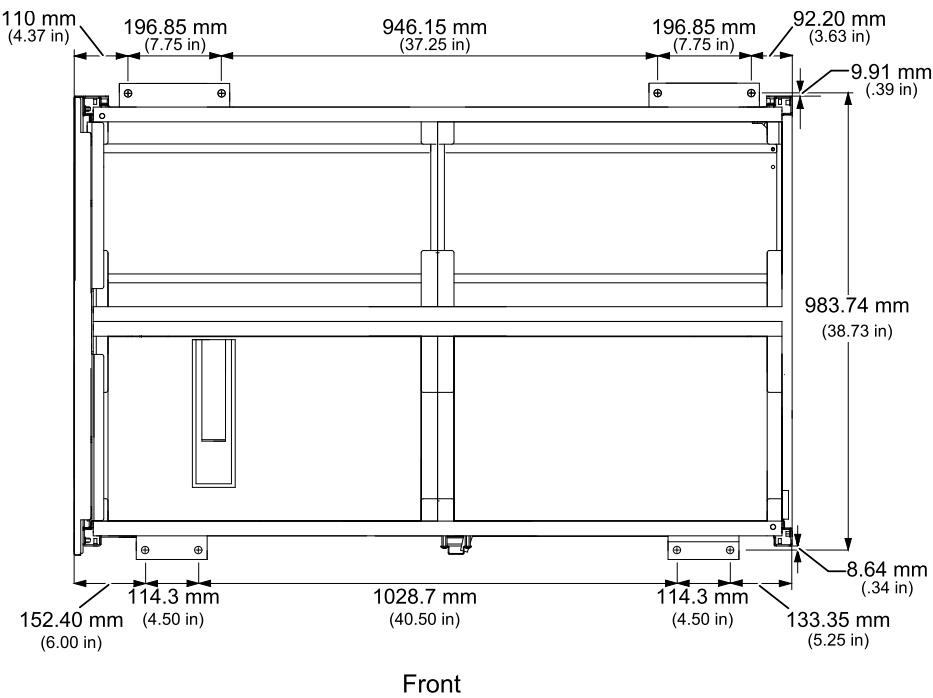
**NOTE:** The anchor bolts are not provided. Use anchor bolts that suit the floor material. The minimum requirement is ½ in grade 5 hardware.

1. Align all cabinets on the rear side seismic alignment line as shown.

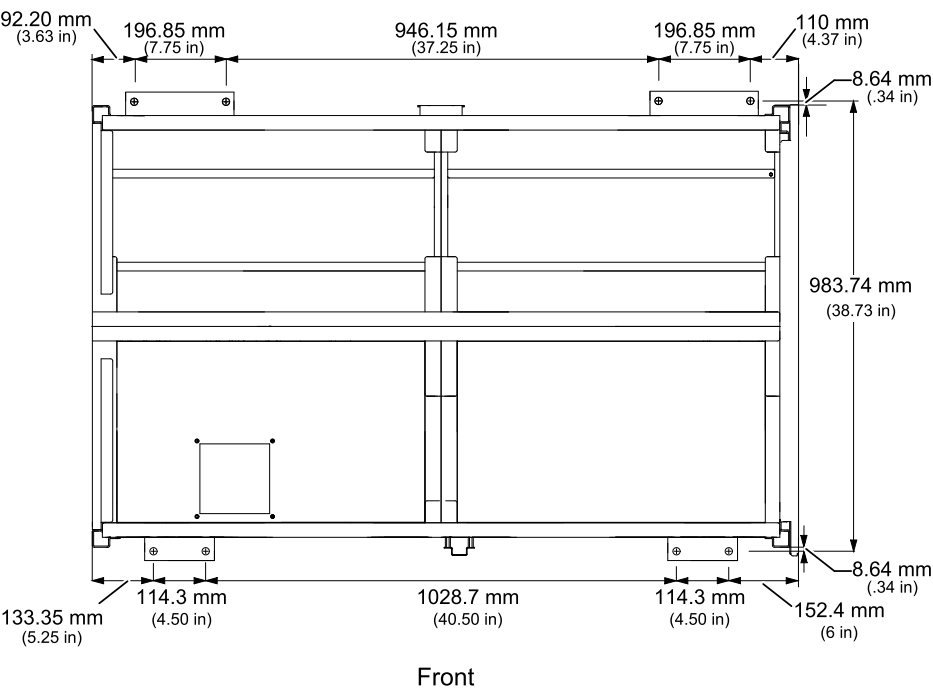


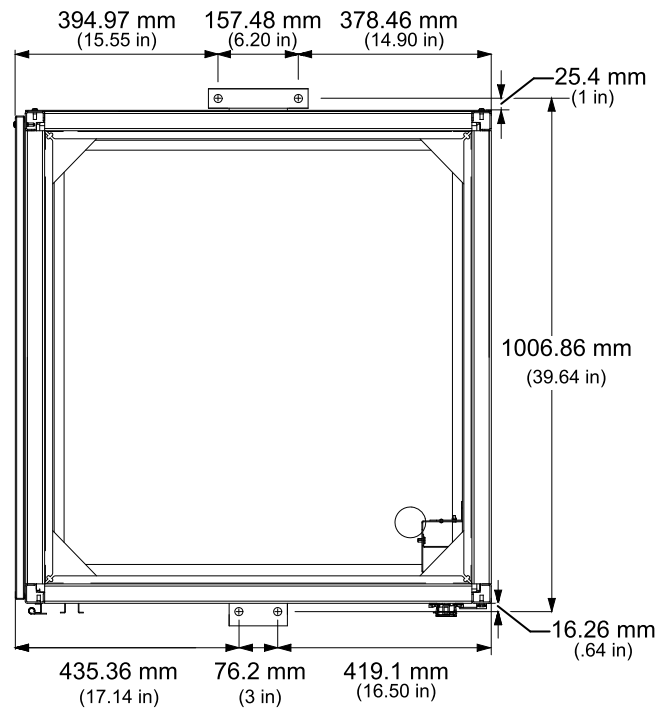
2. Drill anchoring holes in the floor according to the hole positions shown for the cabinets.

Hole Positions for UPS I/O Cabinet

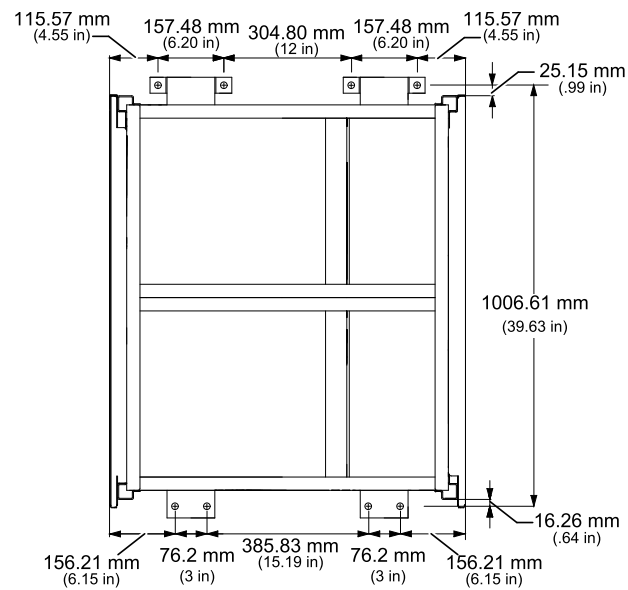


Hole Positions for UPS Cabinet



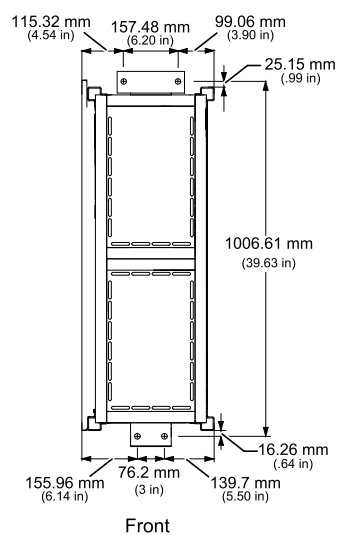
**Hole Positions for Bottom Entry Cabinet**

Front

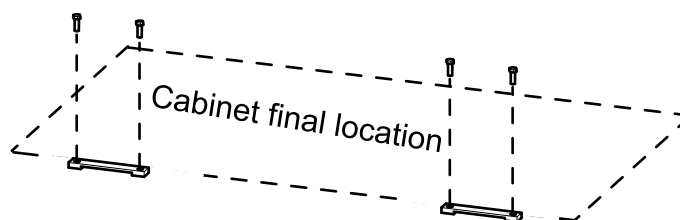
**Hole Positions for System Bypass Cabinet**

Front

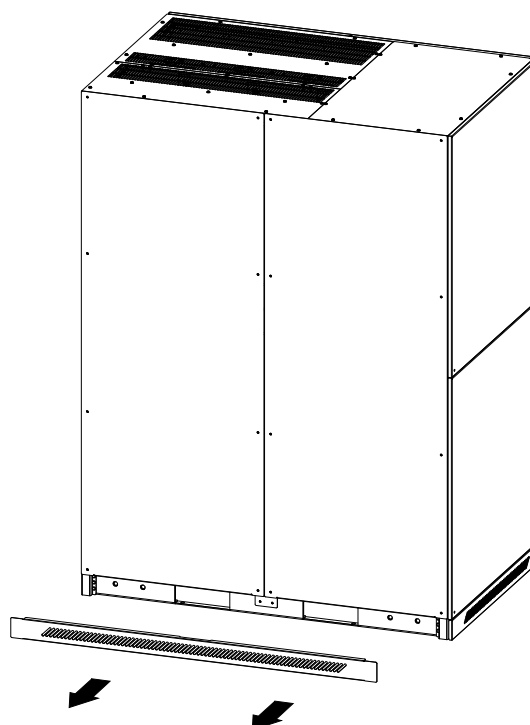


**Hole Positions for Q4S / Auxiliary 14 in Cabinet**

3. Install the rear seismic straps on the floor for each cabinet.

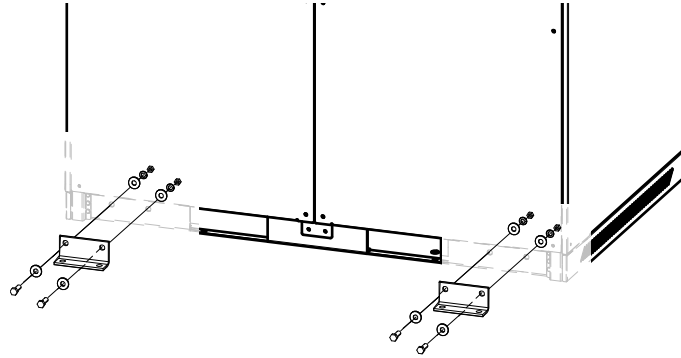


4. Remove rear kickplate from the cabinets.

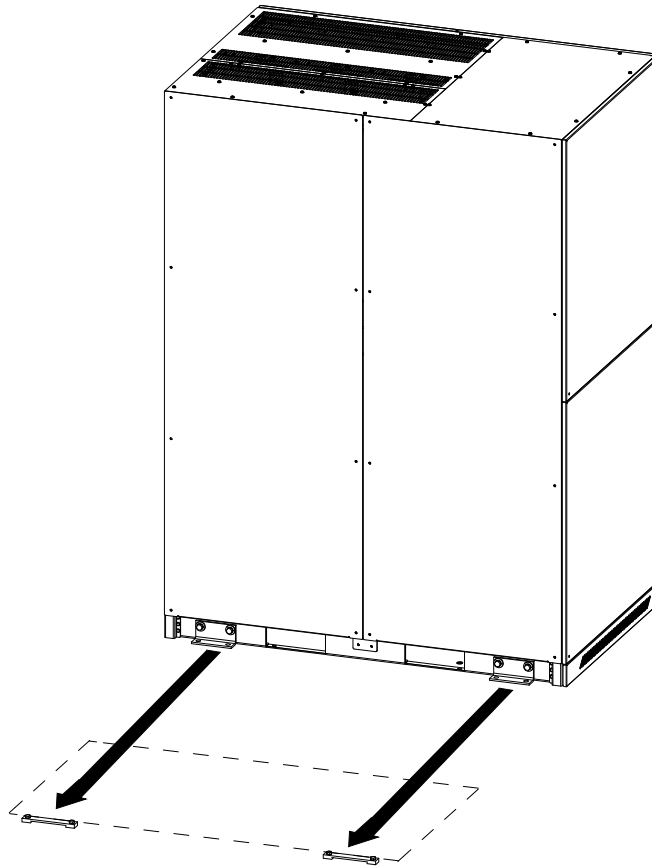


5. Install the seismic bracket(s) on the rear side of the cabinets.

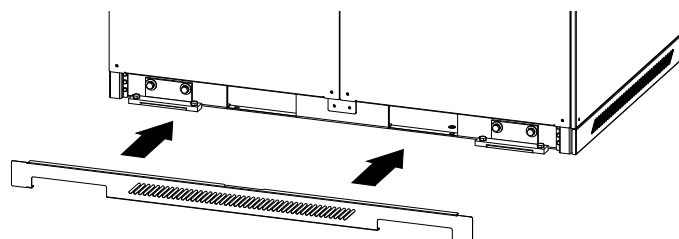
Torque to 94.91 Nm (840 lb-in).



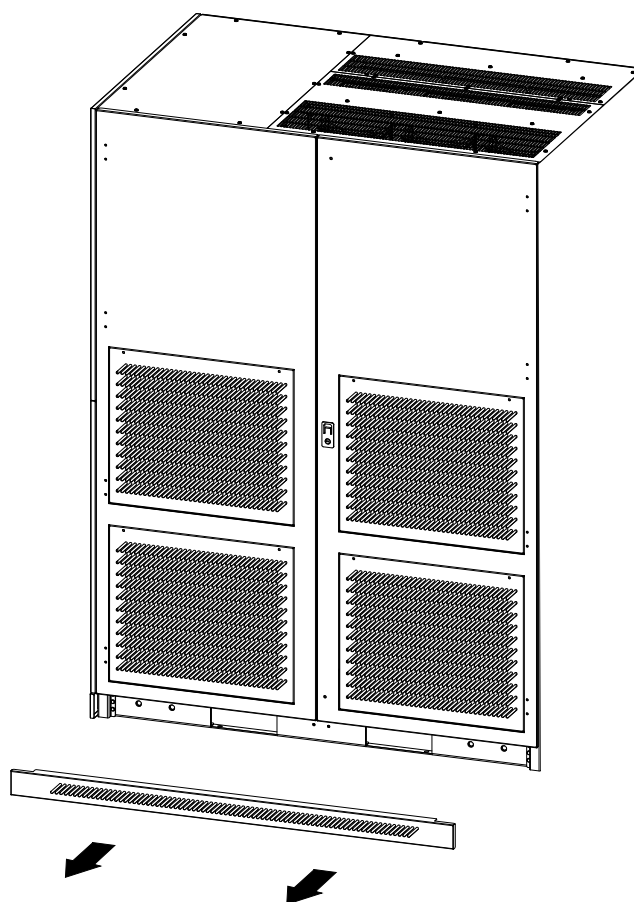
6. Slide the rear seismic brackets under the seismic straps.



7. Install the seismic kickplate on the rear side of the cabinets.

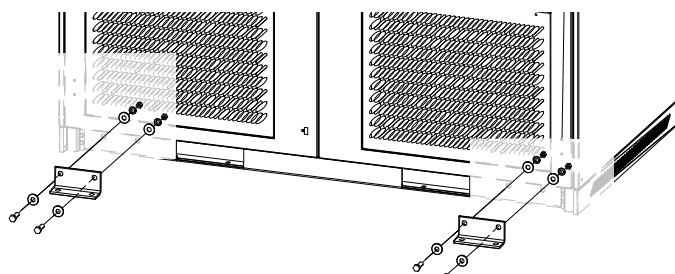


8. Remove the front kickplate from the cabinets.

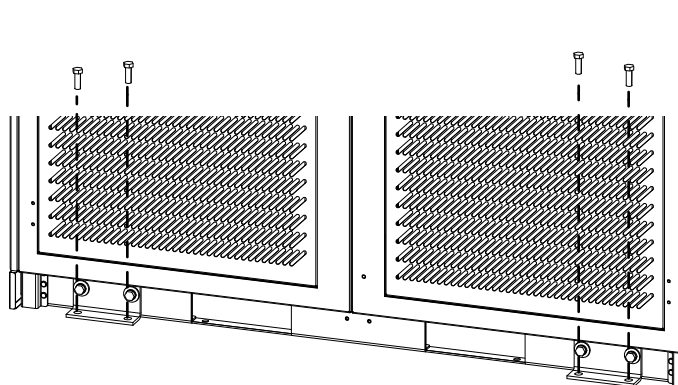


9. Install the seismic brackets on the front of the cabinets.

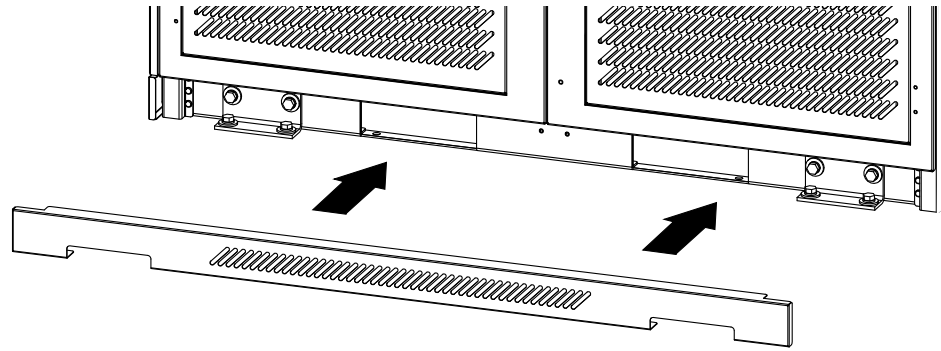
Torque to 94.91 Nm (840 lb-in).



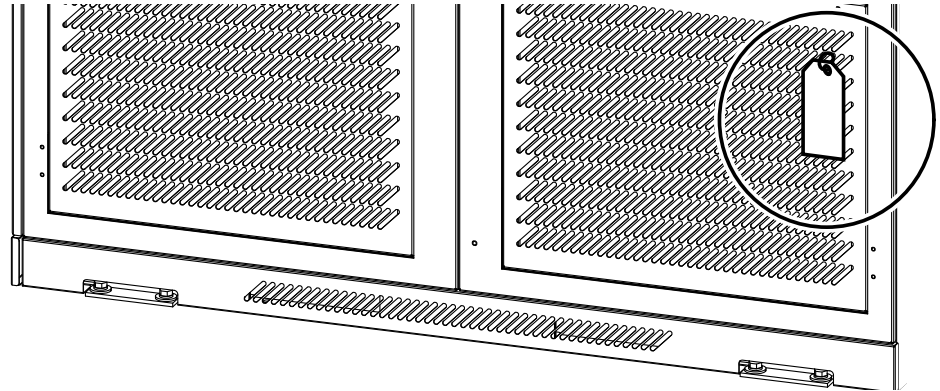
10. Anchor the cabinets to the floor.



11. Install the seismic kickplate on the front of the cabinets.



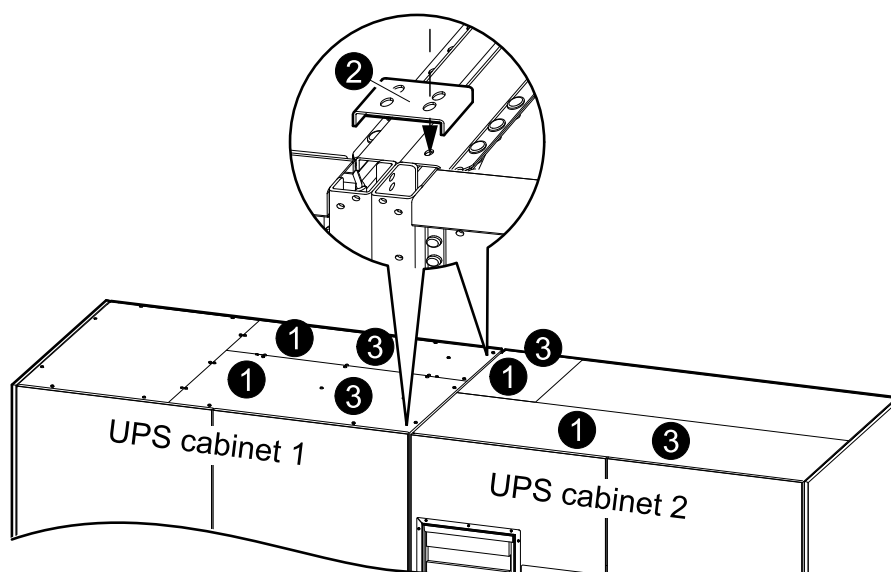
12. If OSHPD review is required: Position all OSHPD certification labels on the UPS cabinet.



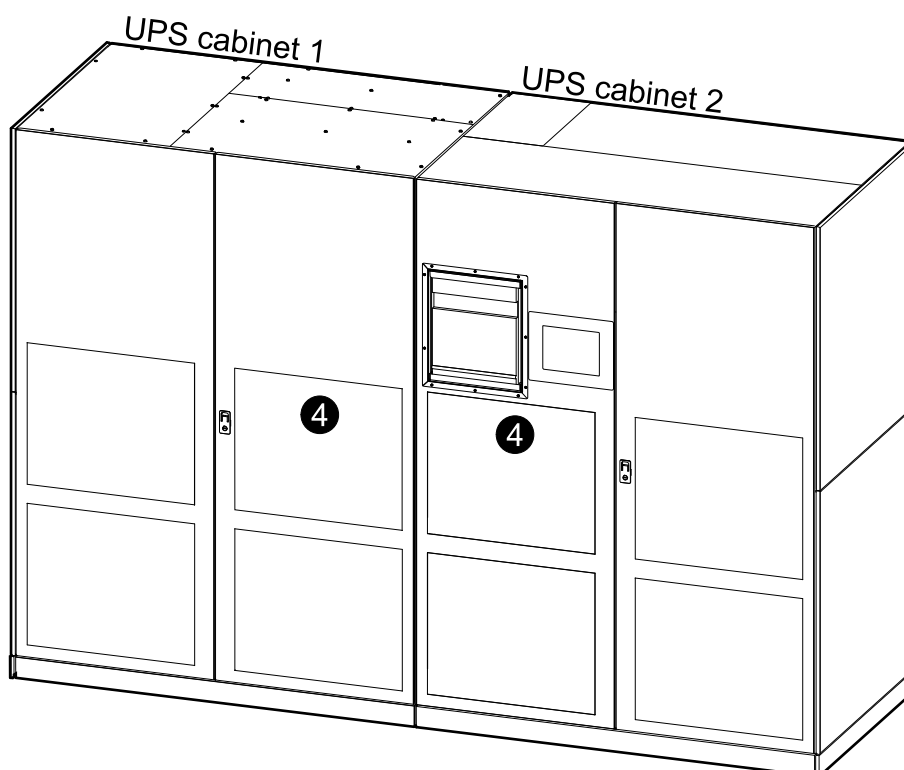
**NOTE:** For EPS 8000 range, OSHPD Application # : OSP-0251-10, Special Seismic certification valid up to 1.41 g.

## Interconnect the Cabinets

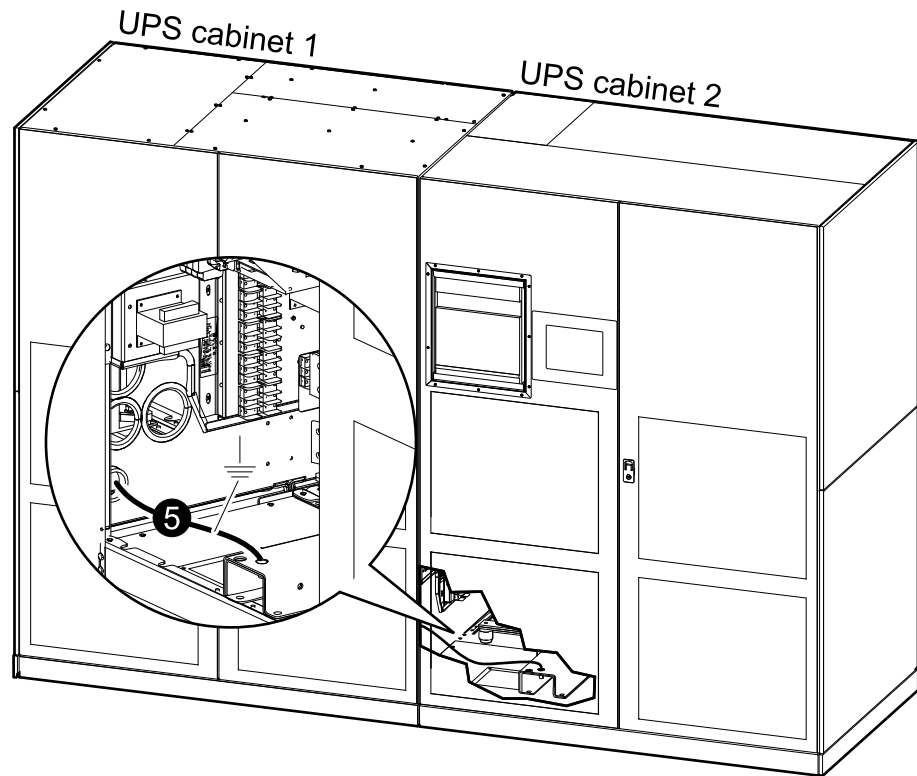
1. Remove the top covers on the UPS cabinets.
2. Install the two top securing brackets between UPS cabinet 1 and 2.



3. Reinstall the top covers.
4. Open the right front cover on UPS cabinet 1 and the left front cover on UPS cabinet 2.



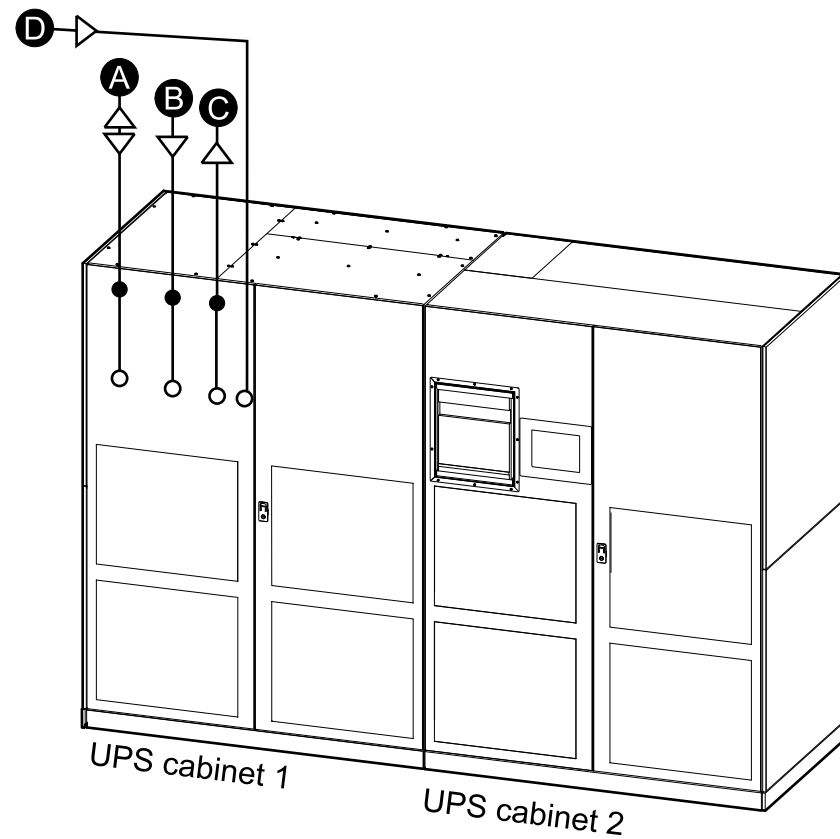
5. Route the ground cable from the ground busbar in UPS cabinet 1 through the side panel and connect it to the ground busbar in UPS cabinet 2.



# Connect the Power Cables

## Overview of Cables

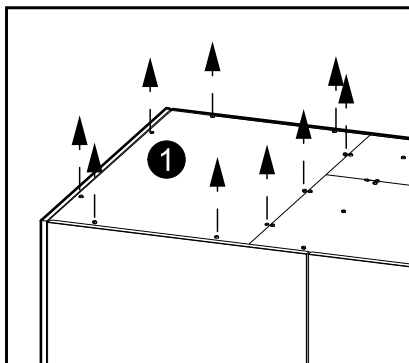
- A. Battery
- B. Input
- C. Output
- D. Input for single mains (optional)



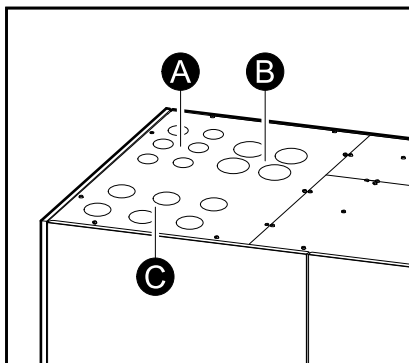
## Prepare for Cables

1. From the front, remove the left top cover of UPS cabinet 1.

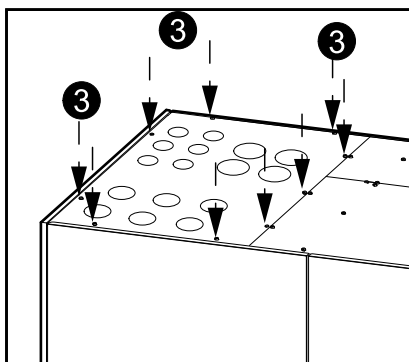
### UPS Cabinet 1



2. Drill/punch holes for conduits in the top cover.
  - A. Battery cables
  - B. Output cables
  - C. Input cables



3. Reinstall the top covers with the conduits installed.



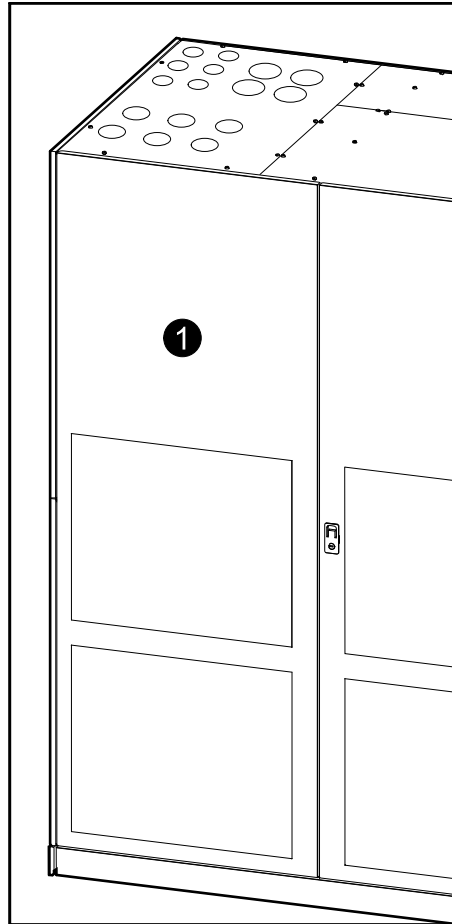


## Connect the Input Cables

**NOTE:** The cables are shown for graphical representation only and do not represent the actual number to be used for the installation.

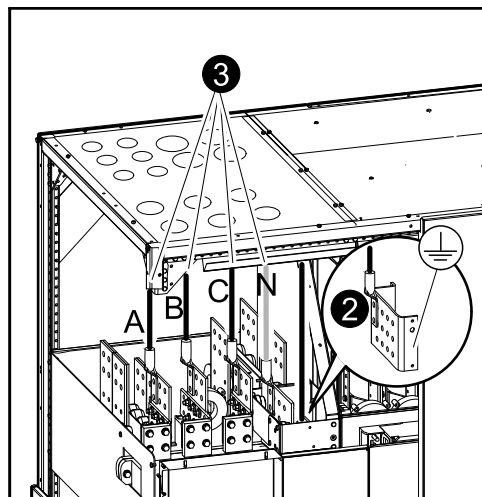
1. Open the left front cover of UPS cabinet 1.

### UPS Cabinet 1



2. Connect the PE (Protective Earth) cable. The cable can be connected either at the front (as shown) or at the rear of the PE busbar.
3. In the upper left corner of UPS cabinet 1, connect the input cables (A,B,C,N) to the input cable landings.

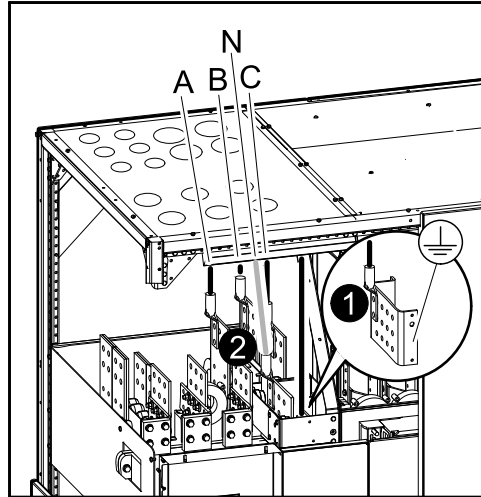
### UPS Cabinet 1



## Connect the Output Cables

1. Connect the PE (Protective Earth) cable. The cable can be connected either at the front (as shown) or at the rear of the PE busbar.
2. Connect the output cables (A,B,C,N) to the output cable landings.

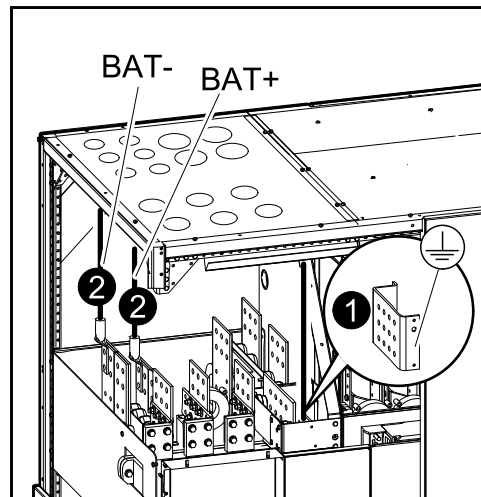
### UPS Cabinet 1



## Connect the Battery Cables

1. Connect the PE (Protective Earth) cable. The cable can be connected either at the front (as shown) or at the rear of the PE busbar.
2. Connect the battery cables (BAT-, BAT+) to the battery cable landings.

### UPS Cabinet 1



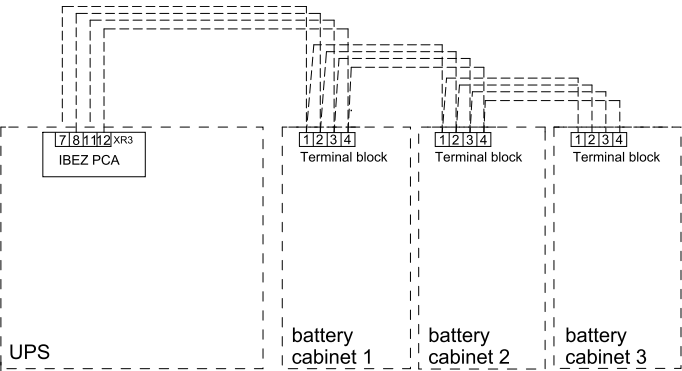
# Connect the Signal Cables

## Routing Rules

- The following rules must be followed to ensure sufficient isolation of signal cables:
- Run and secure signal cables separately from the power cables.
  - Keep a minimum of four inches between power and signal cables.
  - Keep excess cables lengths to a minimum.

## Connect the Battery Communication Cables

The UPS system must be installed according to local and national regulations.  
Control wires must be 16 AWG, UL/CSA.



1. Connect terminal 7 of the XR3 terminal on IBEZ PCA in the UPS cabinet 2 to terminal 1 on the terminal block in the battery cabinet 1.
2. Connect the other battery cabinets in a daisy chain from terminal 1 to terminal 1.
3. Connect terminal 8 of the XR3 terminal on IBEZ PCA in the UPS cabinet 2 to terminal 2 on the terminal block in the battery cabinet 1.
4. Connect the other battery cabinets in a daisy chain from terminal 2 to terminal 2.
5. Connect terminal 11 of the XR3 terminal on IBEZ PCA in the UPS cabinet 2 to terminal 3 on the terminal block in the battery cabinet 1.
6. Connect the other battery cabinets in a daisy chain from terminal 3 to terminal 3.
7. Connect terminal 12 of the XR3 terminal on IBEZ PCA in the UPS cabinet 2 to terminal 4 on the terminal block in the battery cabinet 1.
8. Connect the other battery cabinets in a daisy chain from terminal 4 to terminal 4.

## Overview of Printed Circuit Boards

The following printed circuit boards provide all the different interfaces:

Interfaces	Boards
Control cables for parallel systems	ACPZ APOZ RAUZ
Dry contact interface	IBEZ OBEZ

Telecommunication capability	RAUZ
Temperature monitor connection	IBEZ
Remote EPO Connection	IBEZ

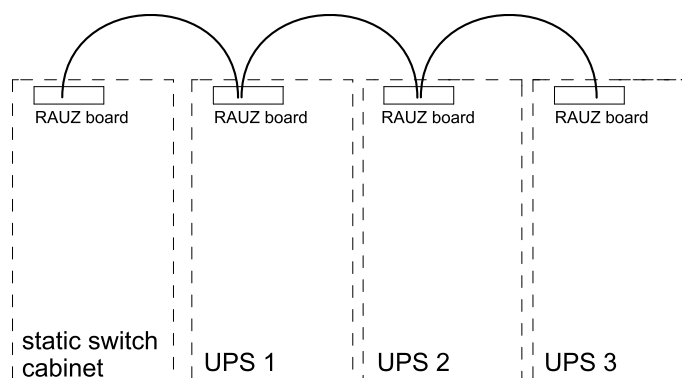
## Connect the Control Cables

The cables and hardware are supplied by Schneider Electric.

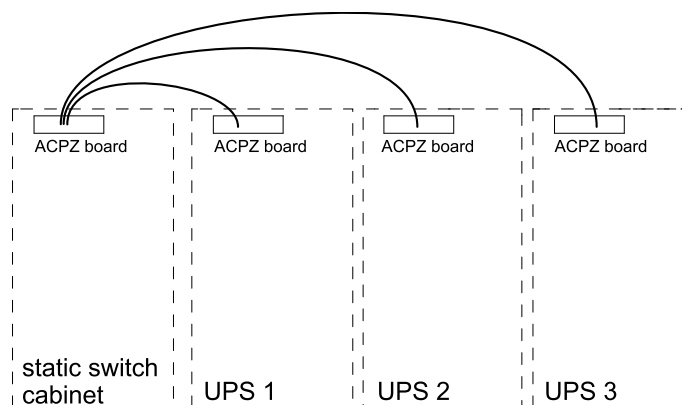
Requirements vary according to the system configuration.

Plug ribbon and control connectors into corresponding receptacles located in the UPS cabinet.

1. Connect the display connections in a daisy chain from the RAUZ board in the static switch cabinet to the RAUZ board in each UPS cabinet.

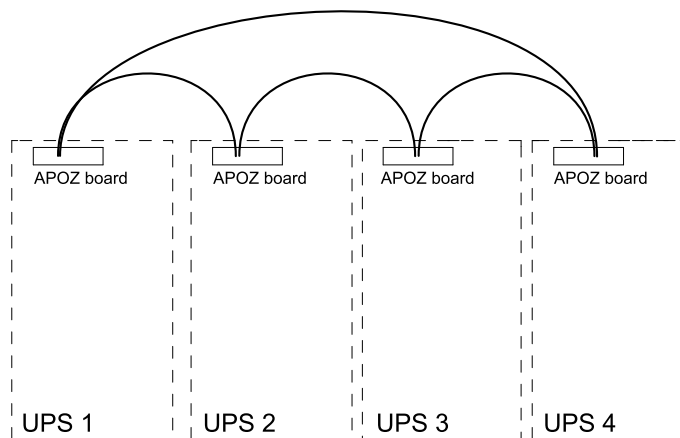


2. Connect the ACPZ board in the static switch cabinet to the ACPZ board in each UPS cabinet forming a star connection.



3. Connect the APOZ boards in UPS cabinet 1 to the APOZ board in UPS cabinet 2.
4. Connect the APOZ boards in UPS cabinet 2 to UPS cabinet 3.
5. Connect the APOZ boards in UPS cabinet 3 to UPS cabinet 4.

6. Connect the APOZ boards in UPS cabinet 4 back to UPS cabinet 1 in a loop type connection.



7. Verify that all connectors are locked in properly.

## Connect Dry Contacts

**NOTE:** Maximum wire size is 16 AWG.

### Dry Contact Information

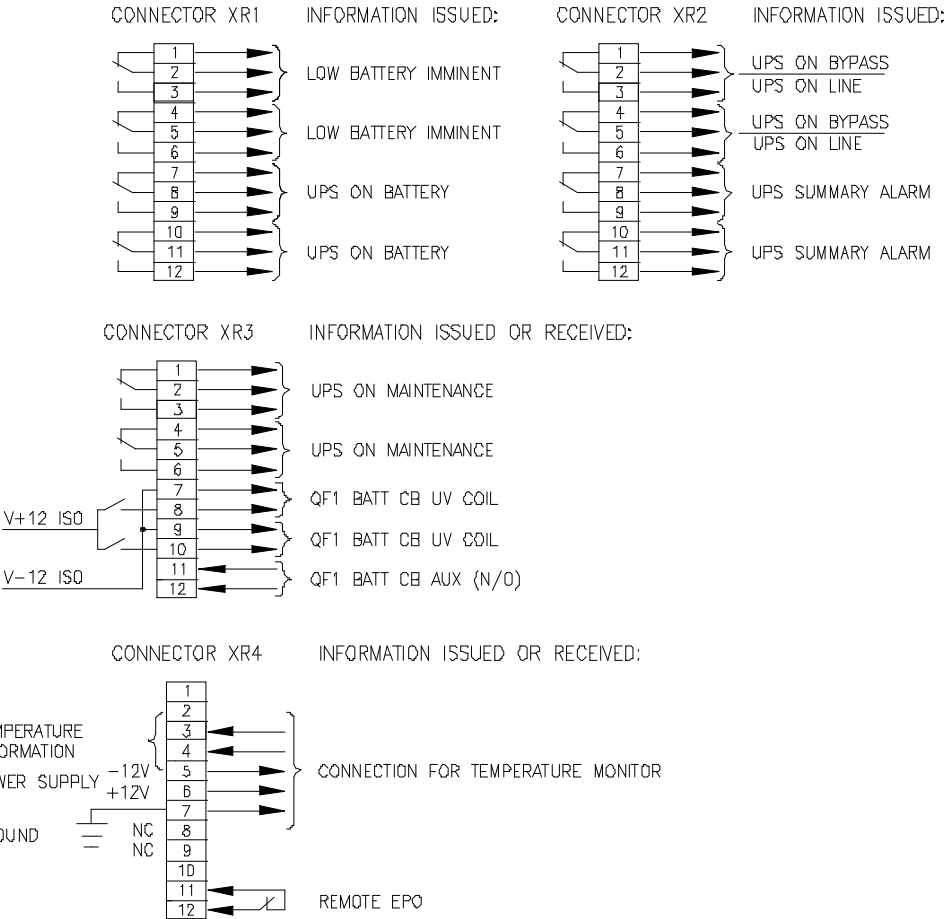
Information	Type	Board
Bypass out of tolerance	Output	OBEZ
Inverter inoperable	Output	OBEZ
Low battery imminent	Output	IBEZ
Overload	Output	OBEZ
Rectifier/charger function inoperable	Output	OBEZ
Rectifier/charger ON	Output	OBEZ
Static switch inoperable	Output	OBEZ
UPS on battery	Output	IBEZ
UPS on bypass/on line	Output	IBEZ
UPS summary alarm	Output	IBEZ
QF1 battery circuit breaker aux	Output or input	IBEZ
QF1 battery circuit breaker UV coil	Output or input	IBEZ
Temperature information	Output or input	IBEZ
UPS on maintenance	Output or input	IBEZ
2nd step battery charged current	Input <sup>6</sup>	OBEZ
2nd step input current limit	Input <sup>6</sup>	OBEZ
Break transfer prohibited	Input <sup>6</sup>	OBEZ
Bypass transfer prohibited	Input <sup>6</sup>	OBEZ
Forced inverter stop	Input <sup>6</sup>	OBEZ
Inverter desynchronization with bypass	Input <sup>6</sup>	OBEZ

<sup>6</sup> These inputs require enabling at the factory, or by field service engineer on site.

Information	Type	Board
Progressive rectifier charger shutdown	Input <sup>7</sup>	OBEZ
Remote UPS off	Input	OBEZ
Remote UPS on	Input	OBEZ

IBEZ Board Information

Contacts shown with all power off.



For detailed information on the communication features, contact Schneider Electric.

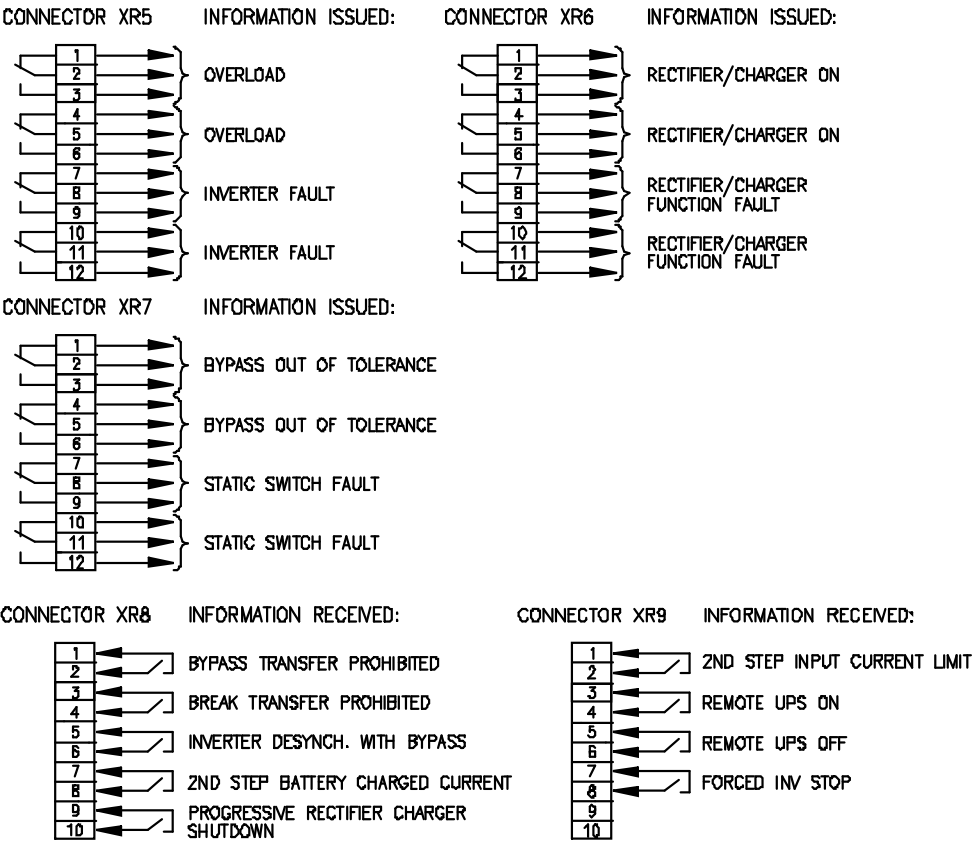
OBEZ Board Information

Some received information requires enabling at the factory, or by field service engineer on site. Consult table above.

Contacts shown with all power off.

XR8 and XR9 connectors output voltage is +24 VDC.

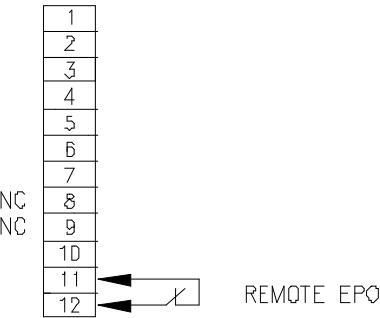
7. These inputs require enabling at the factory, or by field service engineer on site.



Connect Remote EPO

IBEZ board XR4 information

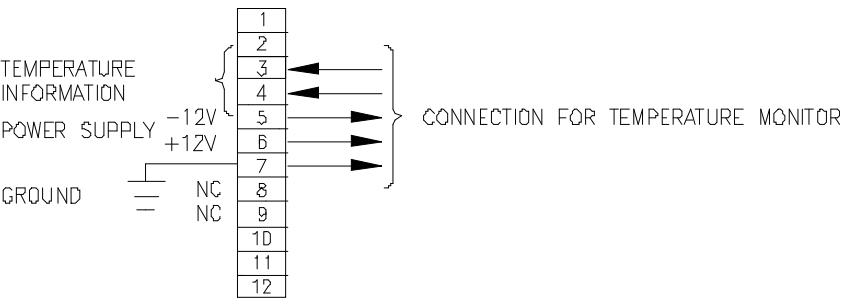
Remove factory–installed jumper when remote EPO (emergency power off) is installed.



Connect the Temperature Monitor

IBEZ Board XR4 Information

Connection of temperature monitor requires enabling at the factory or by field service engineer on site.



## Connect Telecommunication

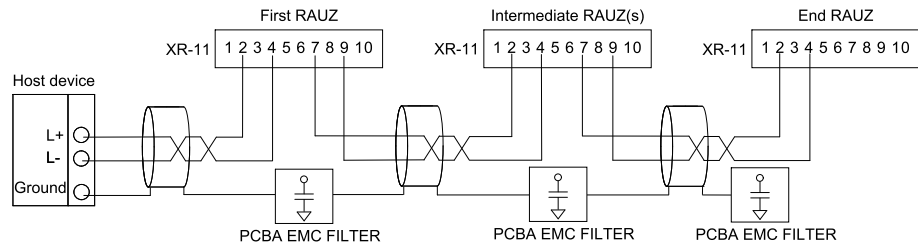
**NOTE:** Used wire must be shielded twisted pair . Maximum wire size is 16 AWG.

### RAUZ Information

RS422/485 requires switch setting by factory or field service engineer. For detailed information, contact Schneider Electric.

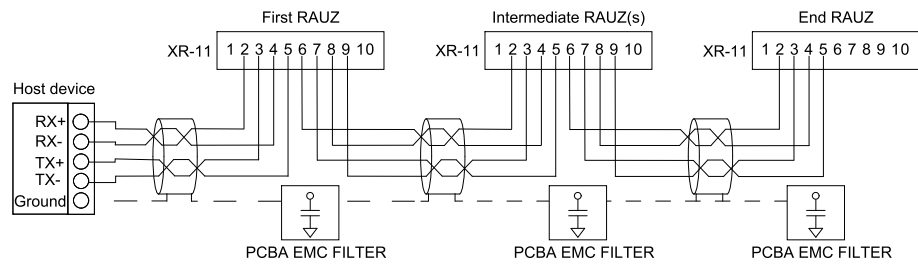
#### Traditional 2 wire and shielding method for RS485 multipoint

Shield is grounded at converter.



#### Traditional 4 wire and shielding method for RS485 multipoint

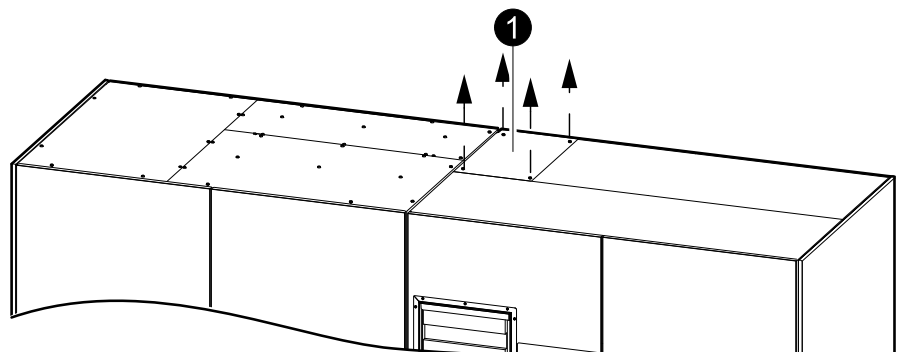
Shield is grounded at converter.



## Route the Signal Cables

All communication cables are connected to UPS cabinet 2, except for connections to the ACPZ board located in UPS cabinet 1.

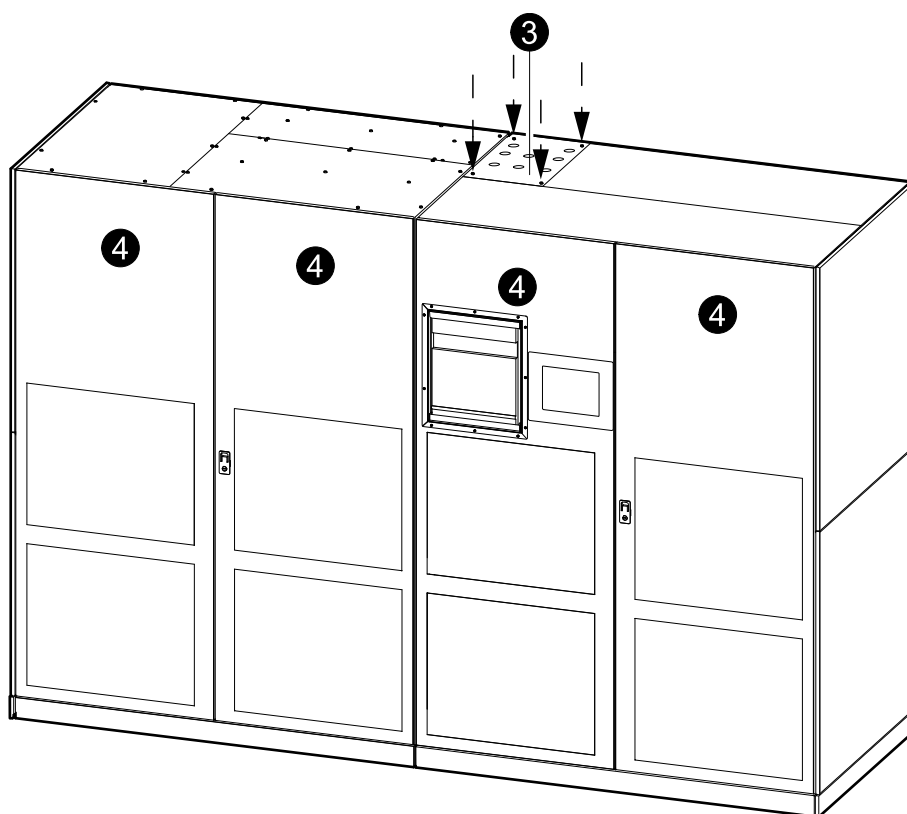
1. Remove the small rear top plate of UPS cabinet 2.



2. Drill/punch holes for cables.

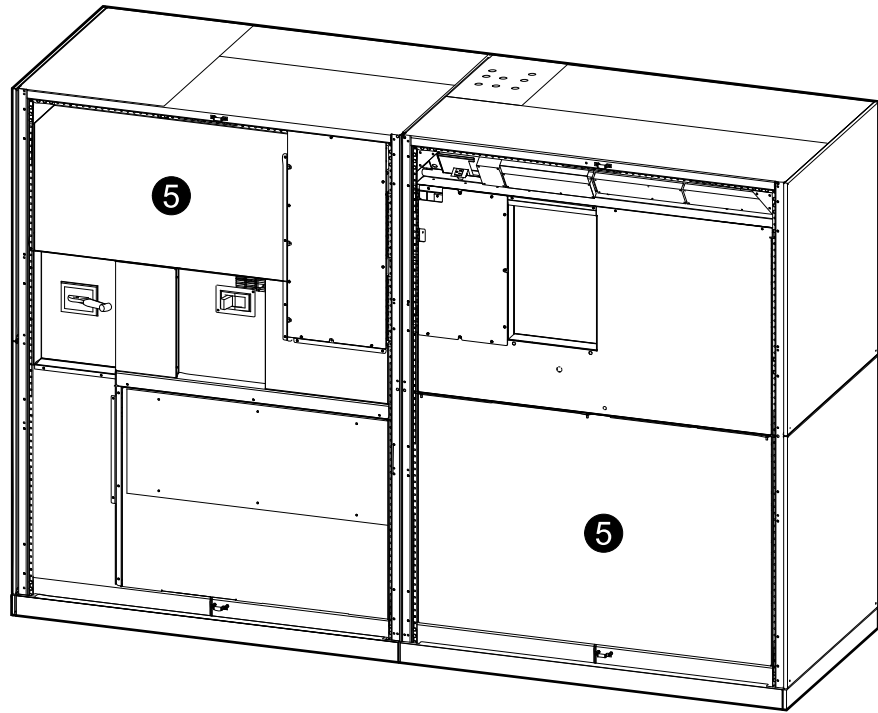


3. Reinstall the top plate.

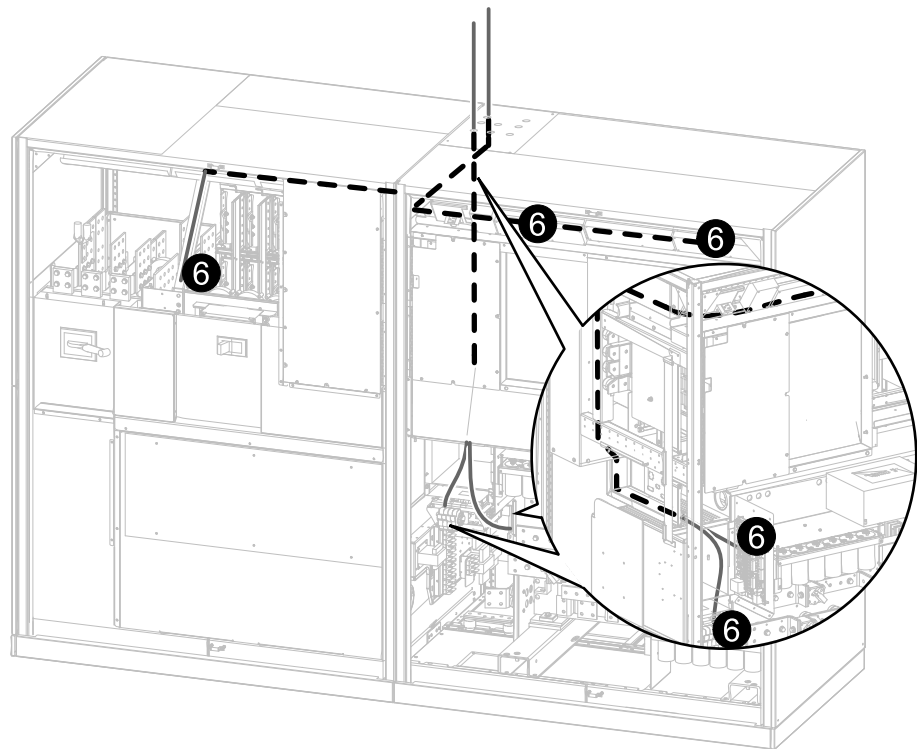


4. Open all doors of UPS cabinets 1 and 2.

5. Remove the shown covers.



6. Route and connect the communication cables between UPS cabinet 1 and UPS cabinet 2.





Schneider Electric  
35 rue Joseph Monier  
92500 Rueil Malmaison  
France

+ 33 (0) 1 41 29 70 00

[www.schneider-electric.com](http://www.schneider-electric.com)

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

© 2015 – . All rights reserved.

990–5205A-001