CSS – OD / 197 kWh
Grid-Tied Commercial Energy Storage Solution

Model CSS-OU-197 / PCS050

Quick Installation Guide

Version 1.2.4

For Europe

General

Symbols

WARNING! This symbol denotes a hazard. It calls attention to a procedure that if not correctly performed or adhered to could result in injury or loss of life. Do not proceed beyond a warning note until the indicated conditions are fully understood and met.

CAUTION! Denotes a hazard. It calls attention to a procedure that, if not correctly performed or adhered to, could result in damage or destruction of the product. Do not proceed beyond a caution sign until the indicated conditions are fully understood and met.

This symbol indicates that this is the Protective Earth (PE) terminal that must be firmly grounded to ensure the safety of operators.

Video

Watch available videos on YouTube

Safety

WARNING: RISK OF ELECTRIC SHOCK
DO NOT touch the wires, contacts, terminals, or any conductors connected to the grid circuit inside the equipment.
Failure to follow safety instructions could result in severe injury or death from electric shock.

WARNING: LETHAL HIGH VOLTAGES exist inside the product.
- Note and abide by all warning signs on the product.
- Observe the safety precautions listed in this manual and other related documents.

WARNING: Damaged Equipment Hazards
- Damaged equipment or system failure may cause electric shock or fire!
- Perform an initial visual inspection of the equipment for damage or other hazards before operation.
- Check whether other external devices or circuit connections are secure.
- Confirm that this equipment is in a safe state before operating it.

WARNING: This equipment must be installed by **licensed electrician** and qualified personnel only. The installation and wiring of this equipment must comply with all applicable national, state/provincial, and local electrical codes and standards. Attempting installation by unqualified individuals could result in unsafe operation, code violations, personal injury/loss of life, or damage to the equipment.

WARNING: Battery Protection
DC HIGH VOLTAGE! ELECTRIC SHOCK HAZARD!
The battery in the system generates a high voltage when connected. Accidental contact can result in electric shock or life-threatening injuries.

WARNING: Ground Fault Safety Warning
If a ground fault occurs in the Battery Inverter, high voltage may appear on components that are normally not energized. **Accidental contact with these components can cause serious injury or death**.
Before Operating the system
- Check for ground faults: Ensure the system is free of any ground faults.
- Apply protective measures: Implement all required safety precautions before starting operation.

A ground fault can make normally safe parts dangerously live. Always verify system integrity and follow safety protocols to protect yourself and others.

WARNING: Live Line Measurement
- There are high voltages in the equipment in the integrated Battery Inverter, and accidental touch may cause fatal electric shock hazards.
- During live measurement, take appropriate protection, such as wearing insulating gloves.
- There must be an accompanying person to ensure personal safety.

WARNING: Improper parameter settings
- Improper parameter settings may affect the normal function realization of internal devices.
- Only authorized professionals can set the parameters.

WARNING: Regulatory Compliance
The installation and various operations of the integrated PCS must comply with the relevant standards and regulations of the country/region where the project is located.

WARNING: The inverter should not be directly connected to life support equipment or medical equipment.

Tools & Equipment Requirement

Personal Protective Equipment


Safety Rubber Shoes


Helmet


Rubber Gloves


Safety Clothing


Goggles

Required tools for Battery Cabinet 197 kWh & Battery Inverter

WARNING! Use only insulated tools


Torque wrench with 7mm, 10mm, 14mm, 17mm, 18mm, 19mm sockets


Wire Cutter


Crimping tool


Phillips screwdriver ⌀6 mm, L= 230 mm


Heat gun



Multimeter (≥ 1000 V_{DC})


Cable Stripper


Wire Stripper


Drill (⌀10 mm drill)


Box Cutter


Pipe Cutter


Ladder

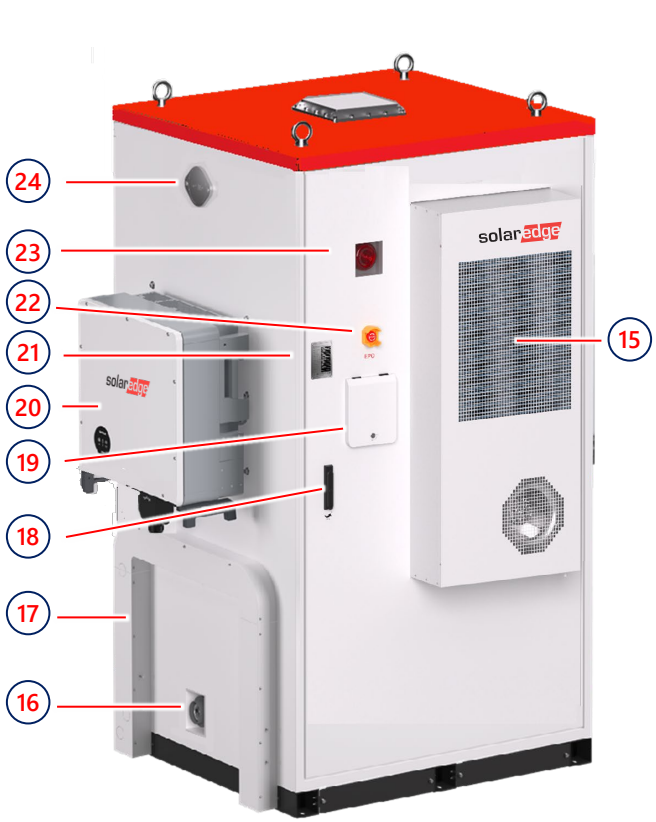

Rubber Hammer

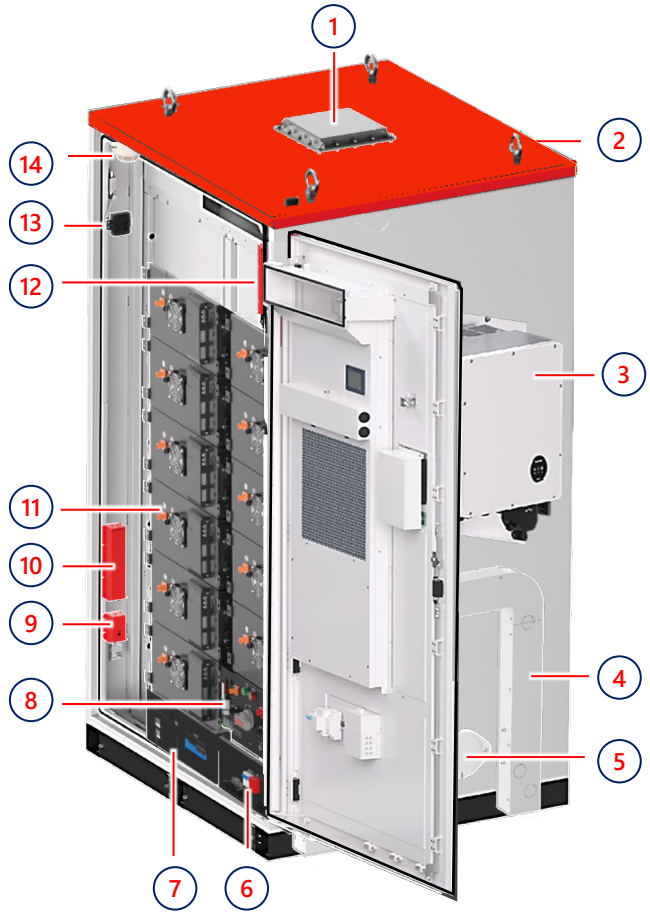

Slotted Screwdriver (10 mm slot)


Slotted Screwdriver for Terminal Block Screws (2 mm slot)


Adjustable Wrench


Open-end torque wrench





1. Pressure Relief Panel
2. Four Eye Bolts
3. Battery Inverter 1
4. Wiring Duct
5. Intake Valve
6. AC Interface Box
7. MBMU/Exchanger
8. Energy Module Management Unit
9. Fire suppression control box
10. Aerosol Fire Extinguisher 2
11. Energy Module (x11)
12. Aerosol Fire Extinguisher 1
13. CO Detector
14. Smoke Detector
15. Battery Cabinet AC (HVAC)
16. Fire Fighting Valve
17. Wiring Duct
18. Door Lock
19. CSS Local Interface Display (EMS)
20. Battery Inverter 2
21. Nameplate
22. Emergency Power Off (EPO) switch
23. Acoustic-Visual Alarm
24. Exhaust Valve

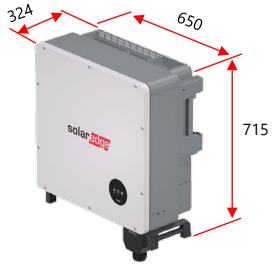
Dimensions and Weights

Battery Cabinet 197 kWh



2360 KG

Battery Inverter 50 kW



68 KG

Battery Inverter 100 kW
Battery Cabinet 197 kWh

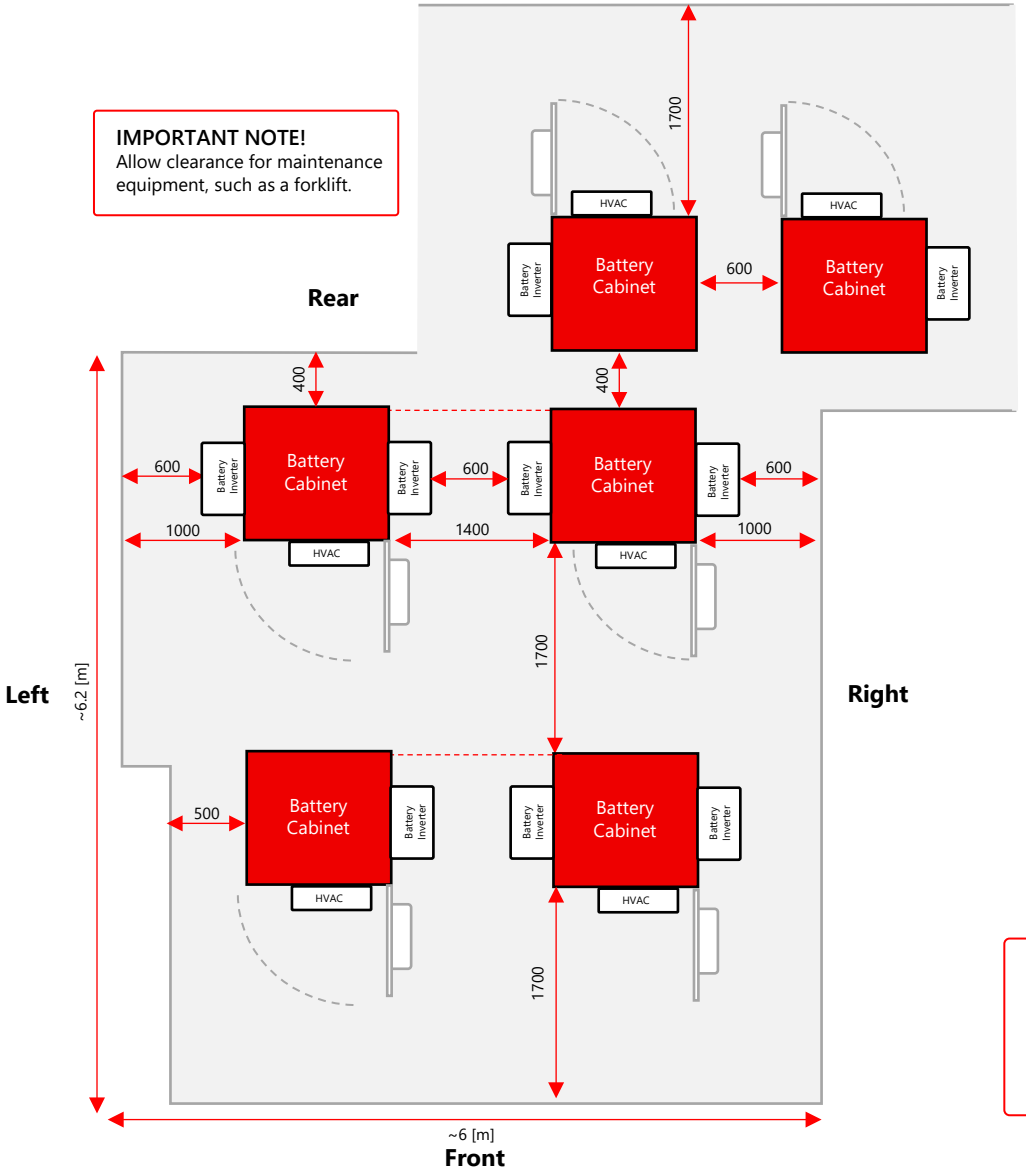
*Assembled Dimensions, Including mounting brackets



2496 KG

*All dimensions are in [mm]

IMPORTANT NOTE!
Allow clearance for maintenance equipment, such as a forklift.



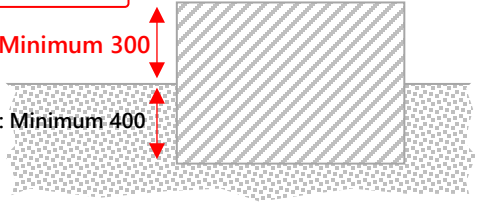
Default Layout & Clearance Distances (Top & front view)

All dimensions w/o units are in [mm]

Battery Cabinet + Battery Inverter	
Direction	**Distance [mm]**
Front	1700
Rear	400
Right	1000 (600 with Battery Inverter)
Left	1000 (600 with Battery Inverter)



WARNING! To avoid flood damage and safety hazards, the cabinet must be installed on a concrete platform with a minimum height of 300 mm.



NOTES!
- Local codes and regulations could extend the required clearances beyond what is specified in this manual
- Before proceeding with installation, consult with relevant authorities to ensure compliance with local regulations concerning clearance distances.

Environmental Conditions & Requirements

CAUTIONS and Requirements of Installation Environment

1. The installation, use, and operation of outdoor equipment and cables, including but not limited to the movement of equipment, operation of devices and cables, connection or disconnection of signal interfaces exposed to outdoor conditions, work at heights, and outdoor installations, are strictly prohibited during severe weather conditions such as lightning, rain, snow, or wind.
2. Avoid installing the equipment near underground facilities like underwater pipes and air outlets or in places prone to condensation. Additionally, steer clear of areas susceptible to water leakage, such as around air-conditioning outlets, vents, and outlet windows in the machine room. This will help prevent liquids from entering the equipment and causing malfunctions or short circuits.
3. Avoid installing the equipment in areas with poor geological conditions, such as rubbery or weak soil, waterlogged ground, or regions susceptible to land subsidence.
4. Do not place the equipment or operate it in a flammable environment or an environment that contains explosive gas or smoke. Ensure that any operations are performed in such a safe environment.
5. Avoid installing the battery cabinet in sandy environments. When installing in a sandy environment, increase the frequency of routine maintenance for the battery vent and HVAC systems: perform a weekly visual inspection and clean as needed based on observed conditions
6. Avoid installing the battery cabinet on unstable or vibrating foundations.
7. Do not install the battery cabinet in a working environment with metal conductive dust.
8. When the equipment is running, do not cover the vents or heat dissipation system to prevent fire due to high temperature.

CAUTION! For indoor installations, a ventilated room is required.



CAUTION!
CSS – OD solution must be installed >2 km from the sea when installed in an outdoor location, or >1 km when installed in an indoor location. Enclosure must be sealed from any salt-containing air. Heat rejection must be achieved via a refrigerant-based (split/mini-split) cooling system, sized to the total heat dissipation of all installed devices plus enclosure heat gain, with adequate margin.



NOTE Battery Cabinet & Battery Inverter max noise is <65 dBA @ 1 meter distance.



CAUTION! When Installed in indoor locations consider heat dissipation values of all installed devices when choosing appropriate room / space for their installation.

Battery Cabinet	
Max Power	**Heat Dissipation**
50 kW	0.87 kWh 2970 BTU
Battery Inverter	
Max Power	**Heat Dissipation**
50 kW	1.5 kWh 5118 BTU

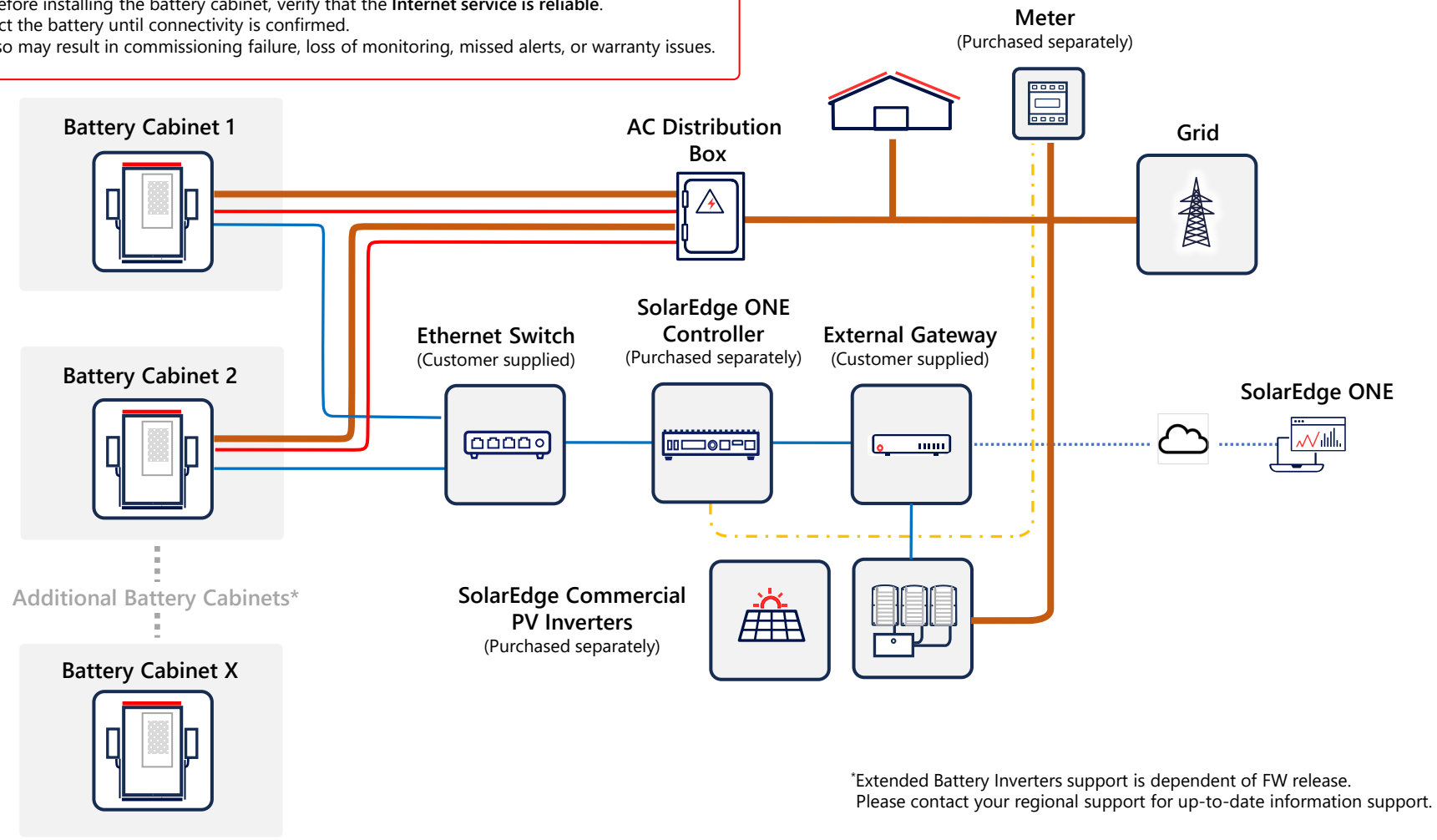
IMPORTANT NOTE!

1. Communication cables and power wires **must** be laid separately (DC and AC loops).
2. The distance between control/communication and power cables must be greater than 300mm.
3. In cases when control cables cross power cables, validate that the angle between the two cables is kept at 90°.
4. The recommended minimum distance between parallel shielded data cables and power cables is shown below:

Parallel length (m)	Min space distance (m)
200	0.3
300	0.5
500	1.2

Site Power & Communication Layout

IMPORTANT NOTE: The battery cabinet requires an active internet connection for commissioning and monitoring. Before installing the battery cabinet, verify that the **Internet service is reliable**.
Do not connect the battery until connectivity is confirmed.
Failure to do so may result in commissioning failure, loss of monitoring, missed alerts, or warranty issues.



*Extended Battery Inverters support is dependent of FW release.
Please contact your regional support for up-to-date information support.

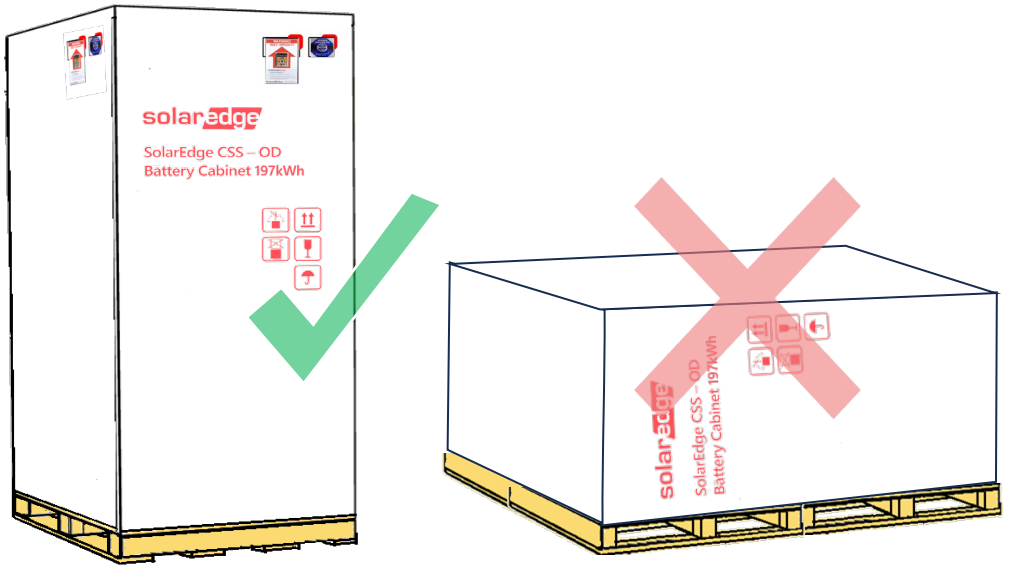
Handling and Inspecting Before Unpacking

NOTES:

- Keep in upright position
- Before opening, validate package integrity

IMPORTANT: Do not open damaged packages & contact SolarEdge to review the case.

NOTE: For SolarEdge commercial Battery storage and transportation guidelines, refer to: https://knowledge-center.solaredge.com/sites/kc/files/se-commercial-battery-storage-transportation-and-storage-guideline_197kwh-eng.pdf



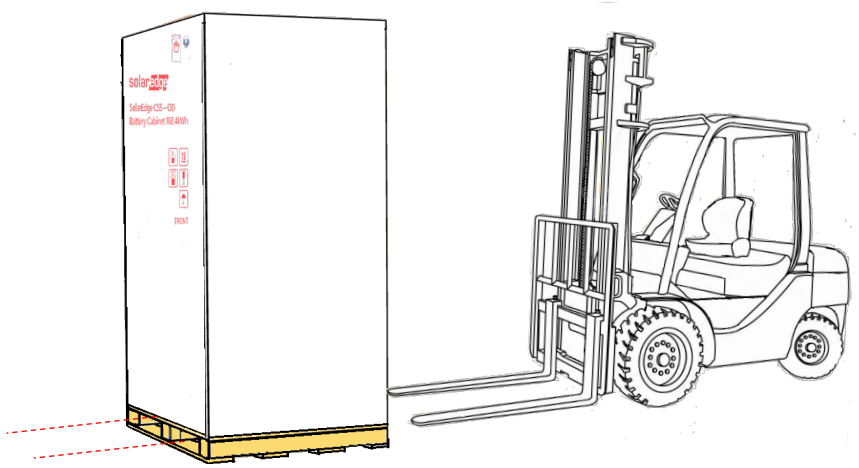
NOTES: For Battery Cabinet Package

- Verify that the shock and tilt label sensors, on the front and right sides of the package, show green indication.
- When opening package, check the integrity of the fire safety solution. If aerosol gas was ejected due to any fault occurred during transportation the battery cabinet shall be replaced.
- If one of the sensors is red, please contact SolarEdge and do not open the package.

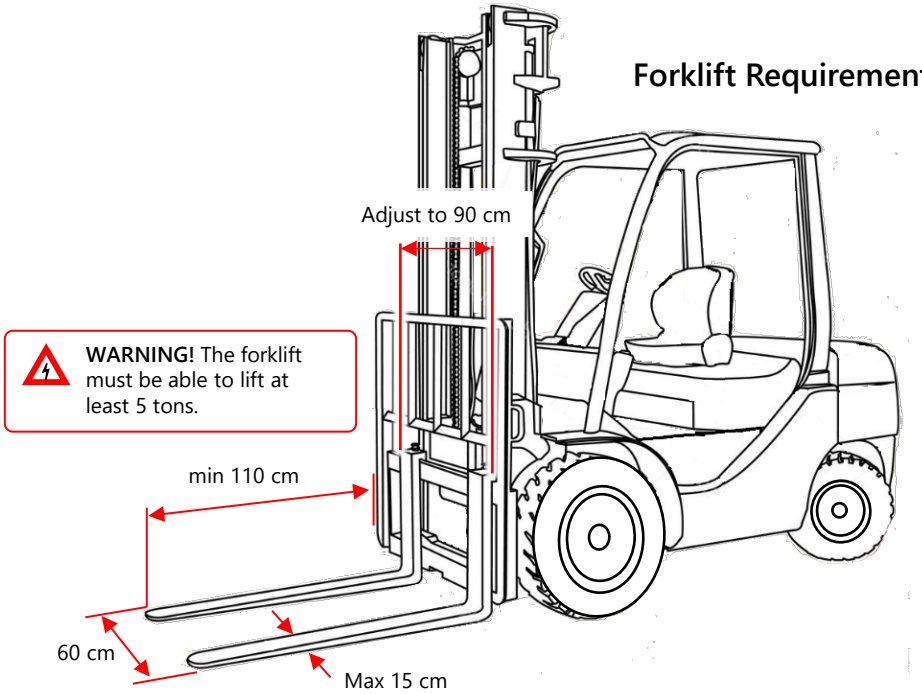


Battery Cabinet Transportation – Forklift Guidelines

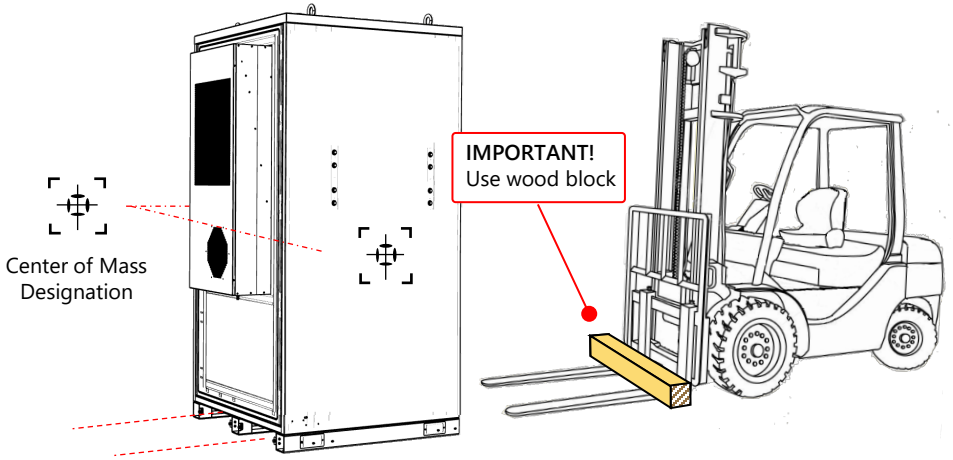
Transporting Battery Cabinet with the Wooden Box

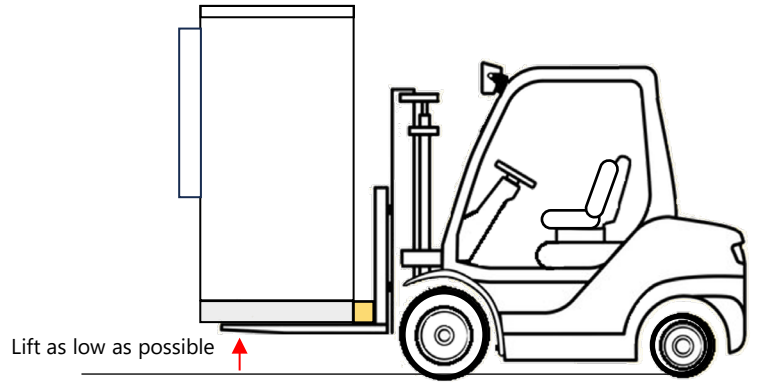


Forklift Requirements



Transporting Battery Cabinet Standalone





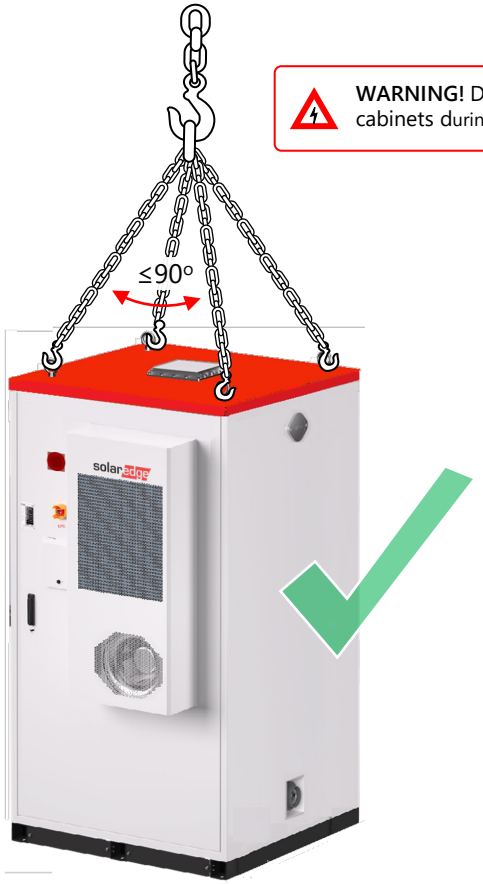
Battery Cabinet Transportation – Crane Lifting Guidelines

HOISTING REQUIRMENTS

WARNING!

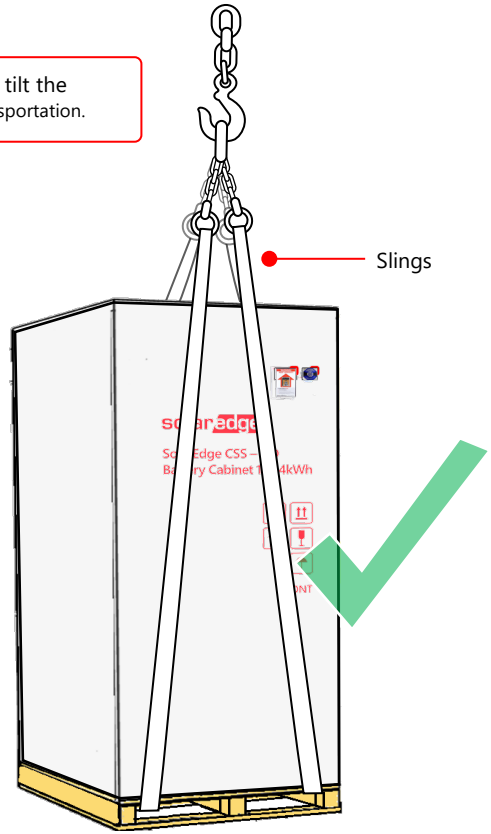
1. A trained and qualified lifting personnel is required.
2. Do not operate a hoist if severe weather or wind is apparent when conducting hoisting outdoors.
3. Keep unauthorized people from entering the area and standing under crane boom.
4. Ensure that the crane and slings meet the load-bearing requirements.
5. To prevent the cabinet from scratching, do not drag it when installing and removing hoisting equipment.
6. Check to ensure that the hoisting tools are in good condition.
7. Ensure that all the doors of the equipment are closed and locked during transportation.

Standalone Battery Cabinet Crane Transportation



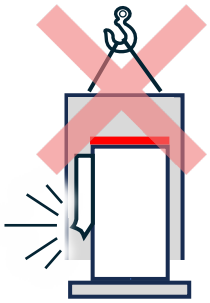
WARNING! Do not tilt the cabinets during transportation.

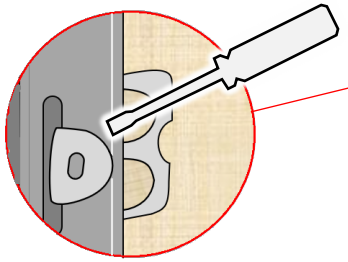
Packaged Battery Cabinet Crane Transportation



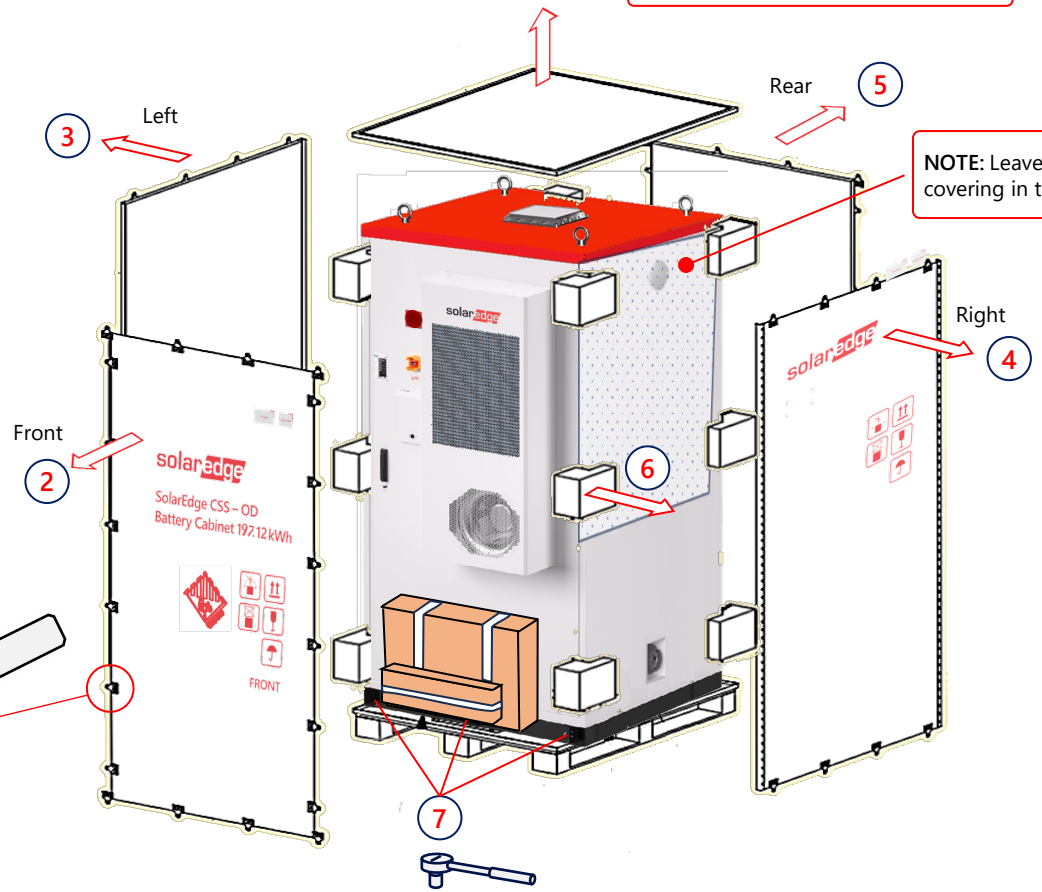
CAUTION! DO NOT REMOVE THE SHIPPING CRATE FROM THE BATTERY CABINET BY LIFTING IT!

To avoid damage to the battery cabinet, make sure it is unpacked in the order shown.





NOTE: Use flat head screwdriver to unfold the connecting buckles



NOTE: Disassembly of the shipping crate must start from the top side

NOTE: Leave protective nylon covering in this area

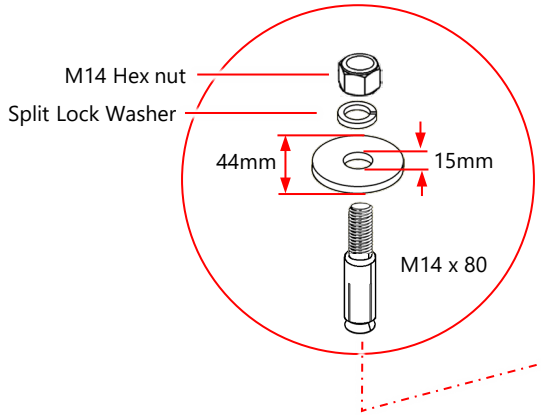
NOTE: Remove the screws and nuts securing the cabinet to the pallet using 19 mm socket (x6)

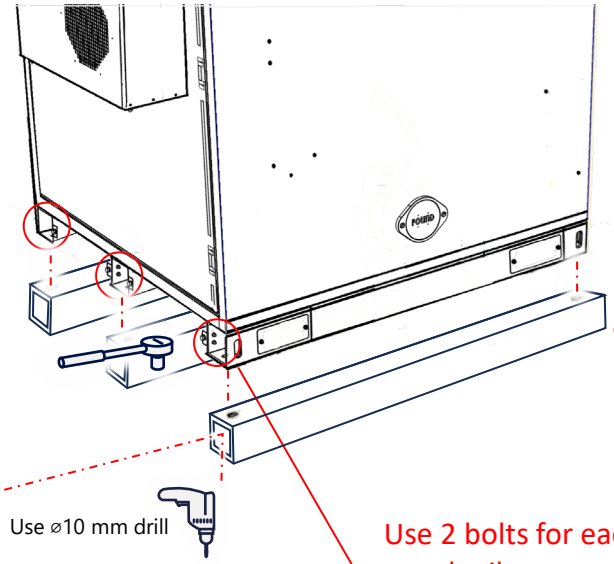
Mounting Battery Cabinet on Mounting Stand

1

NOTE: These expansion bolts & washers are not supplied. Torque is dependent on mounting surface. For concrete: 60Nm

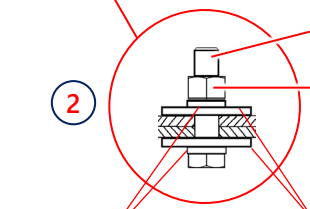
Use 2 studs for each stand rail

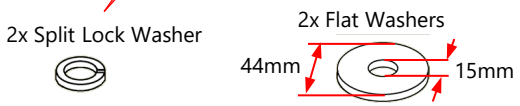




NOTE: For Mounting Stand production guidelines, see Appendix D.

Use 2 bolts for each stand rail





NOTE: Bolts and washers are not supplied

IMPORTANT NOTE!

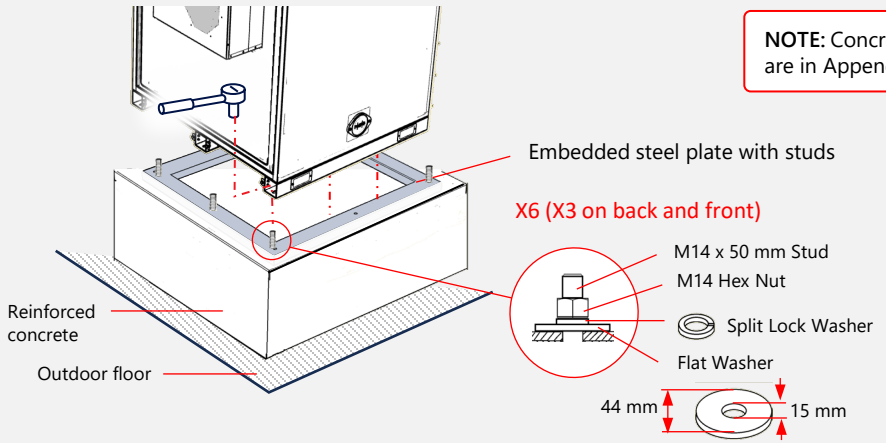
1. Open Mounting Stand provided by the customer.
2. General dimensions & requirements of the Mounting Stand are provided in Appendix D.
3. The customer's civil engineer shall review and approve the structure provided by the customer (open Mounting Stand).

Mounting Battery Cabinet on Concrete Base Platform

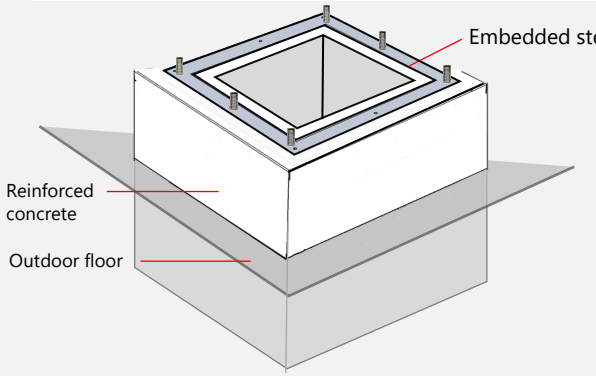
Option 1: Unified Concrete Platform Base with Embedded Steel Plate with Studs

NOTE: Bolts, nuts, and washers are not supplied. Torque depends on the mounting pad. For concrete pads use 60 Nm.

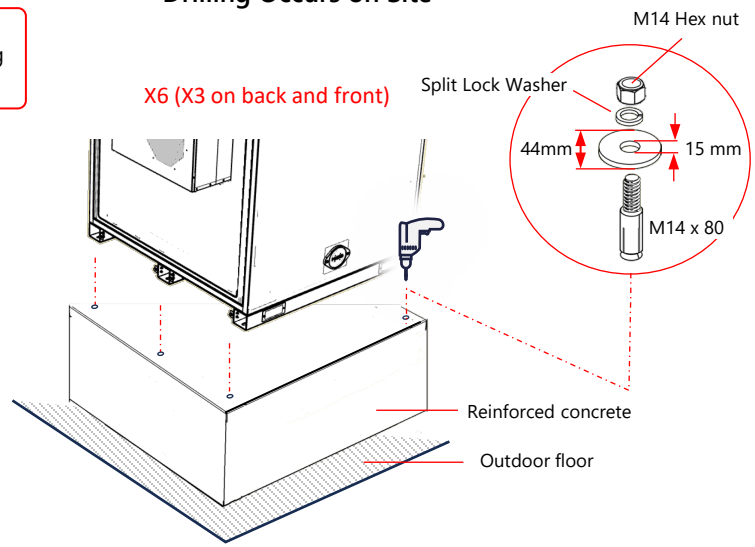
NOTE: Concrete pad guidelines are in Appendix D



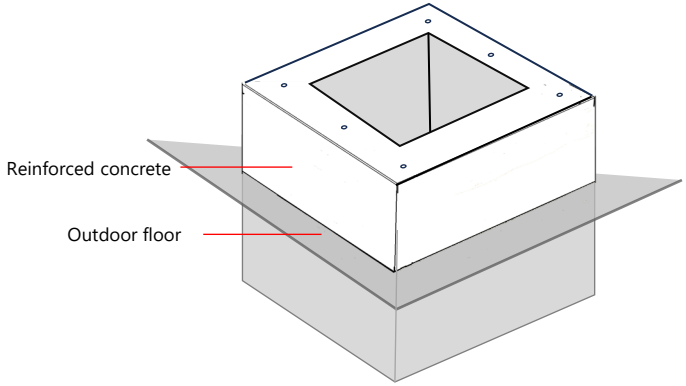
Option 2: Hollow Concrete Platform Base with Embedded Steel Plate with Studs



Option 3: Unified Concrete Platform Base with Drilling Occurs on Site



Option 4: Hollow Concrete Platform Base with Drilling Occurs on Site



Battery Cabinet Package Contents (Inside Accessories Box)

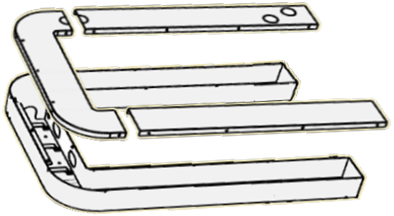
Slot Cover Plate Screws (W)



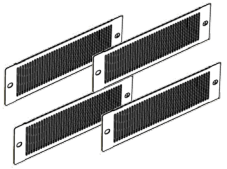
PE cable (0.7m) (E)



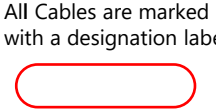
Battery Cabinet Wiring Duct (B)

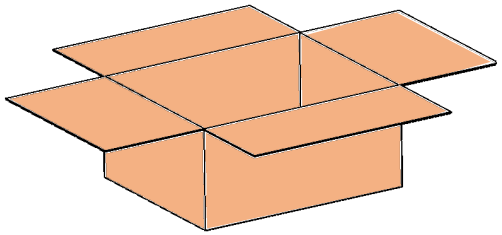


Forklift Slots Covers (x4) (Y) (Outside Accessories Box)

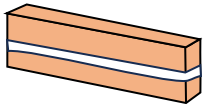


PAY ATTENTION!
All Cables are marked with a designation label

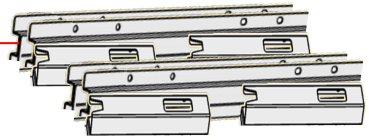




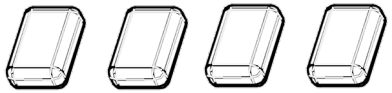
Battery Cabinet Package Contents (Inside Battery Cabinet)



Battery Inverter
Mounting Bracket Kit (x2 Inverters)
(K)



Sealant (x4) (H)



5m Corrugated Plastic
Conduit ⌀34.5 mm (I)

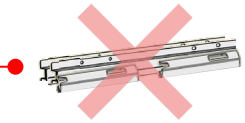


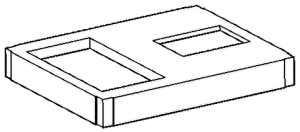
10m Corrugated Plastic
Conduit ⌀21 mm (J)



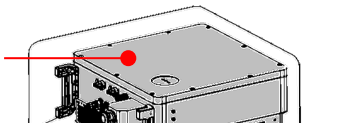
Battery Inverter Package Contents

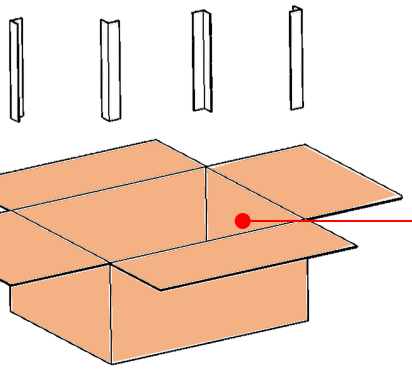
NOTE: DO NOT USE THIS MOUNTING BRACKET. USE THE MOUNTING BRACKET PROVIDED INSIDE THE CABINET





Battery Inverter



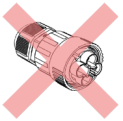


NOTE: THIS PROVIDED CABLE SHOULD NOT BE USED

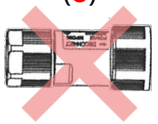
NOTE: THIS PROVIDED CABLE SHOULD NOT BE USED

NOTE: THIS PROVIDED TOOL SHOULD NOT BE USED

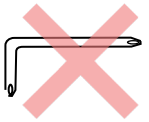
DC-Bus Connector (N)



PARA Cable Connector (O)

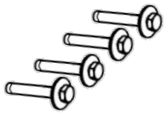


Right-angled Torx key (P)



Bracket Mounting Screws (x4) (Q)

17mm x 30



Bracket Lock Screws (x2)(R)

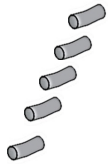
10mm x 16



M6 Lugs (x5) (S)

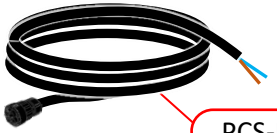


Cables Shrinks (x5) (T)



NOTE: These lugs are compatible with class 2 wires. Please ensure you provide your own lugs if class 5 or 6 wires are used on site.

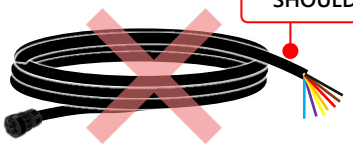
Battery Cabinet to Battery Inverter PARA cables (3.5m) (D)



PCS-PARA

PARA Cable

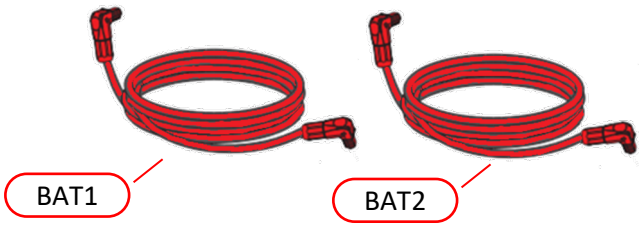
NOTE: THIS PROVIDED CABLE SHOULD NOT BE USED



Cabling Kit Package Contents

PAY ATTENTION!
All Cables are marked with a designation label

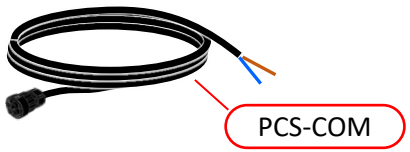
DC+ Paralleling
Cables (x2) (5m) (U)



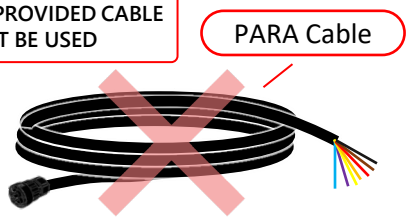
DC- Paralleling
Cables (x2) (5m) (V)

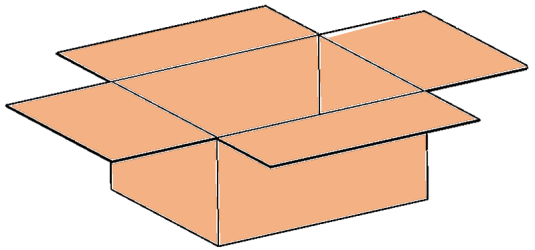


Battery Cabinet to
Battery Inverter
CAN cables (3.5m) (C)

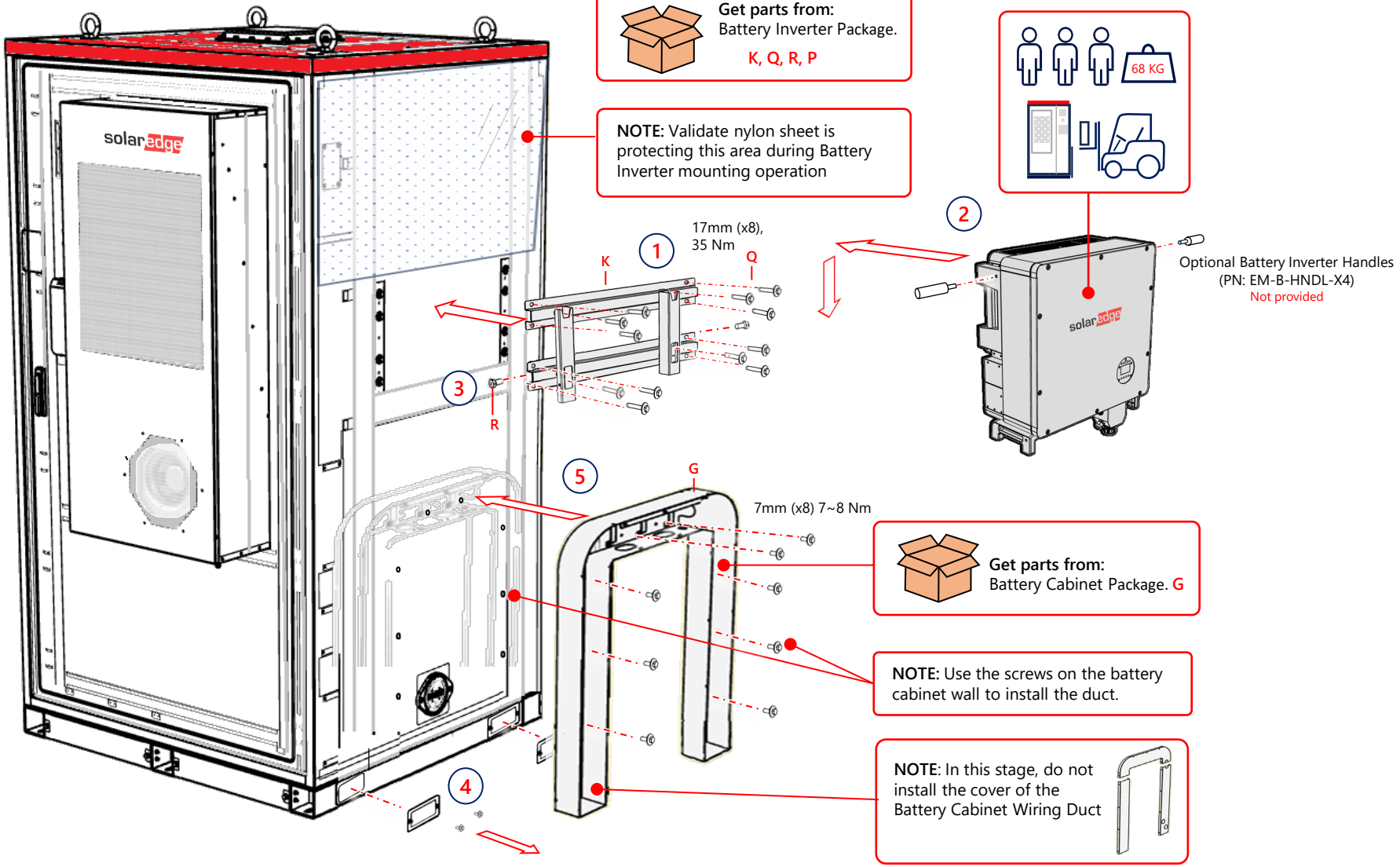


NOTE: THIS PROVIDED CABLE SHOULD NOT BE USED

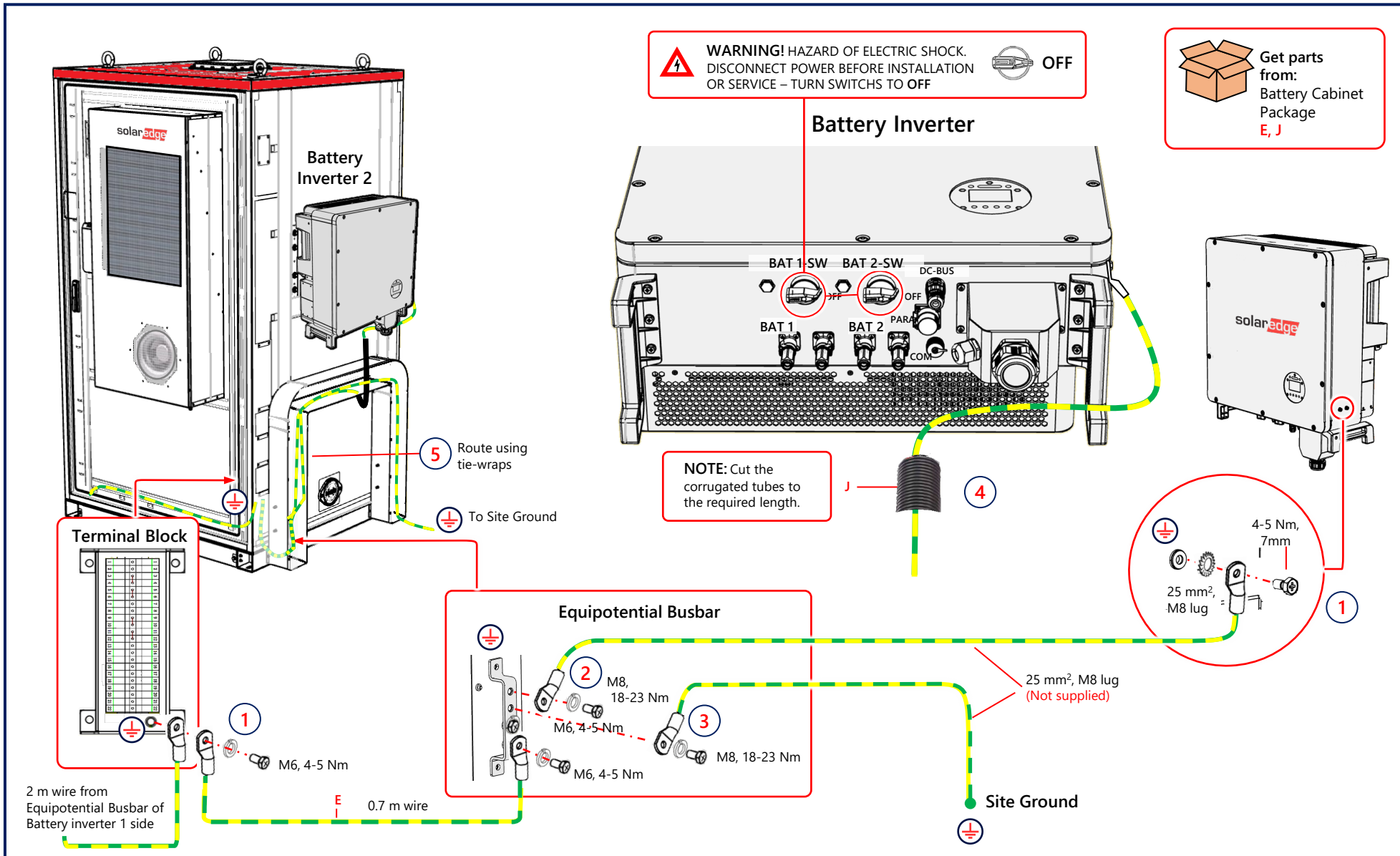




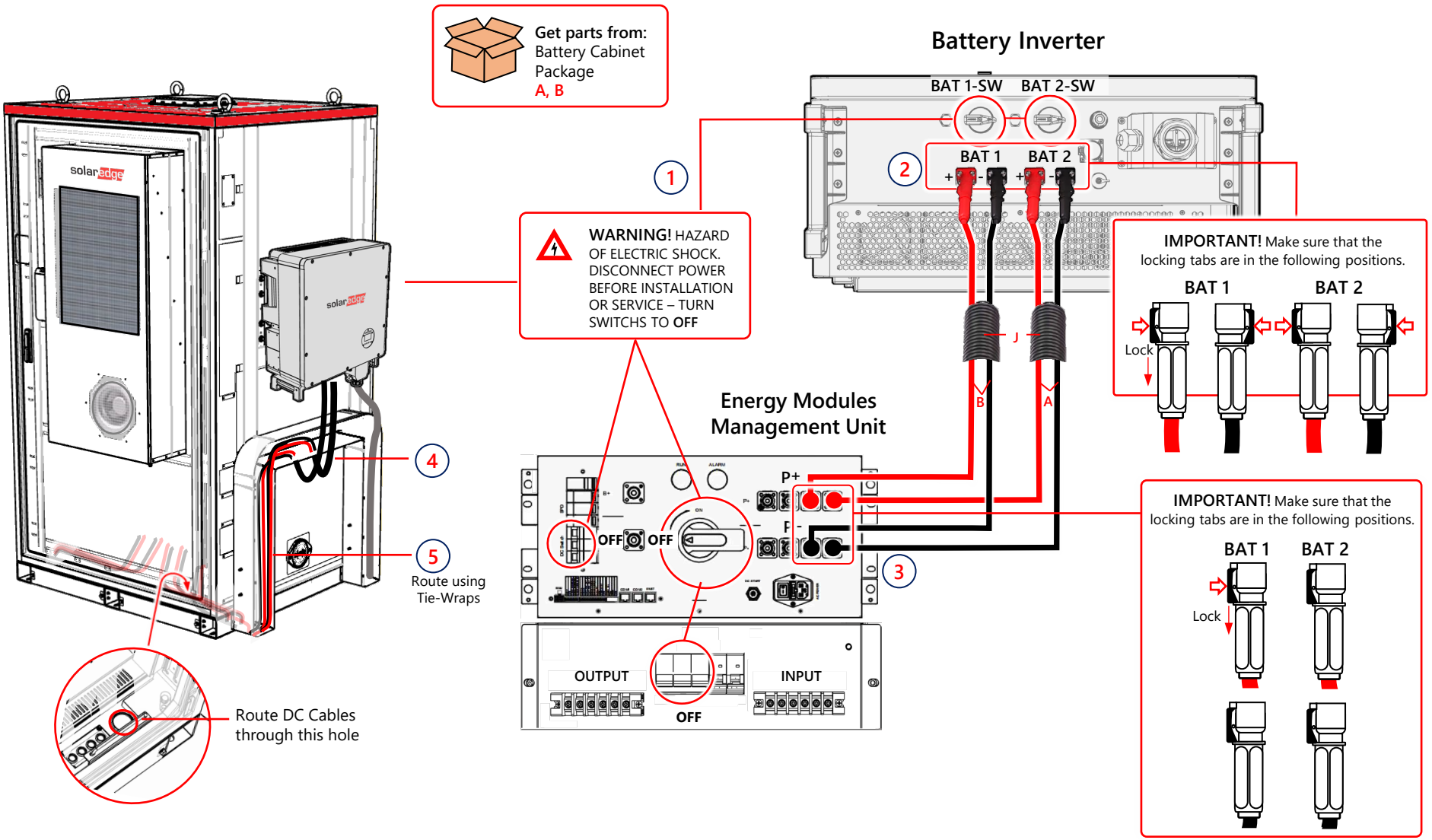
Mounting Battery Inverter onto the Battery Cabinet



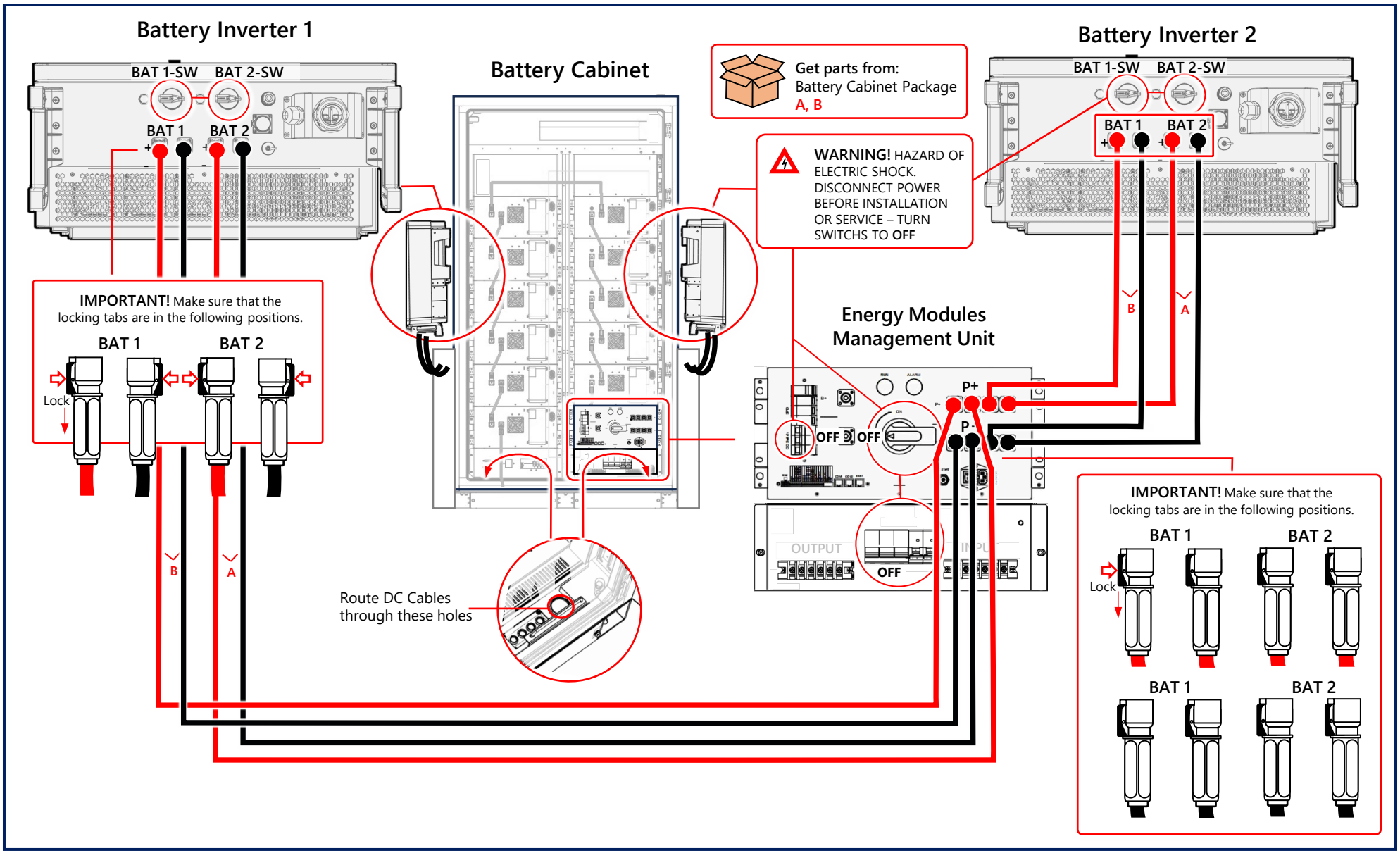
Battery Cabinet & Battery Inverter PE Wiring



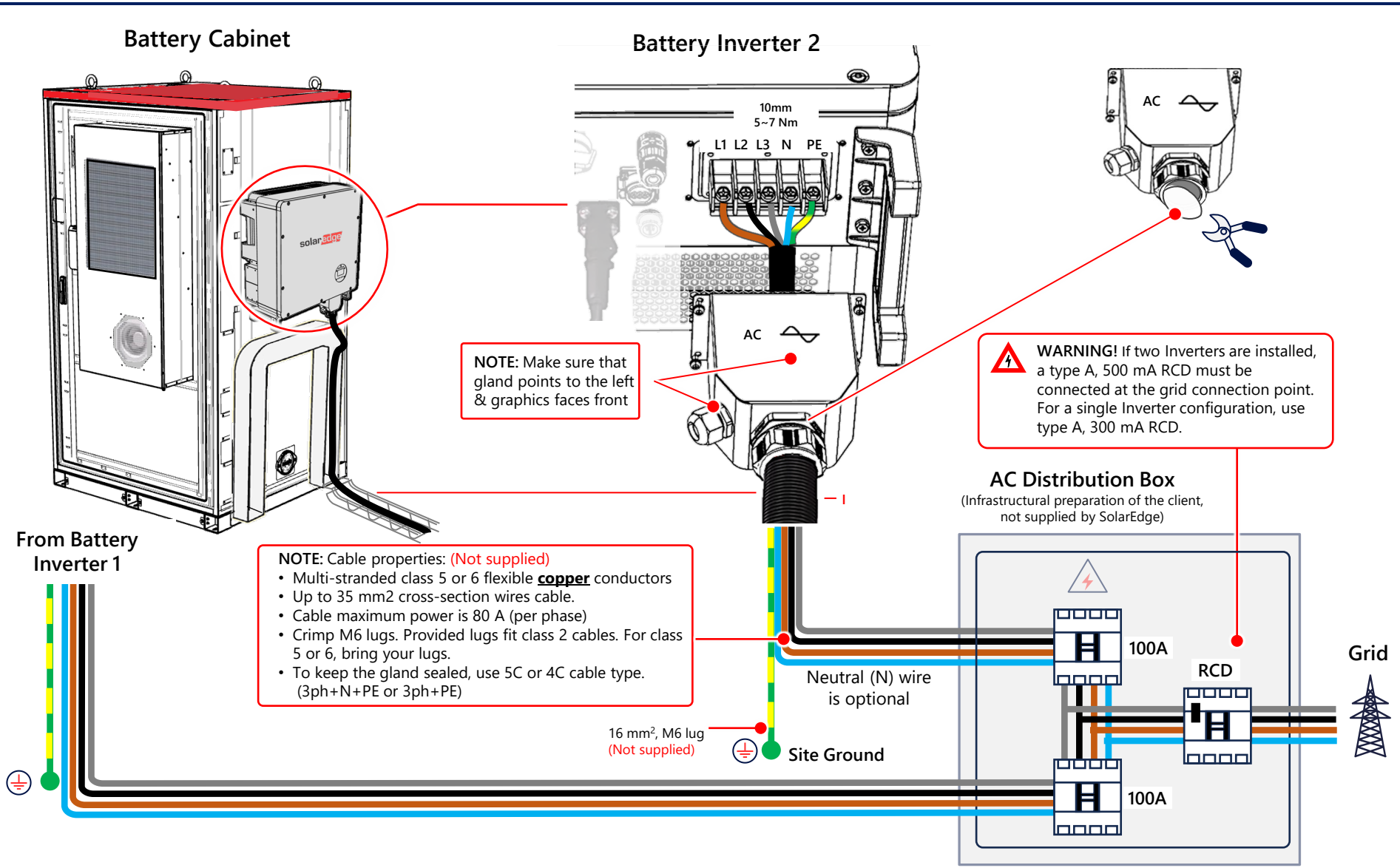
Wiring Battery Inverter to Battery Cabinet



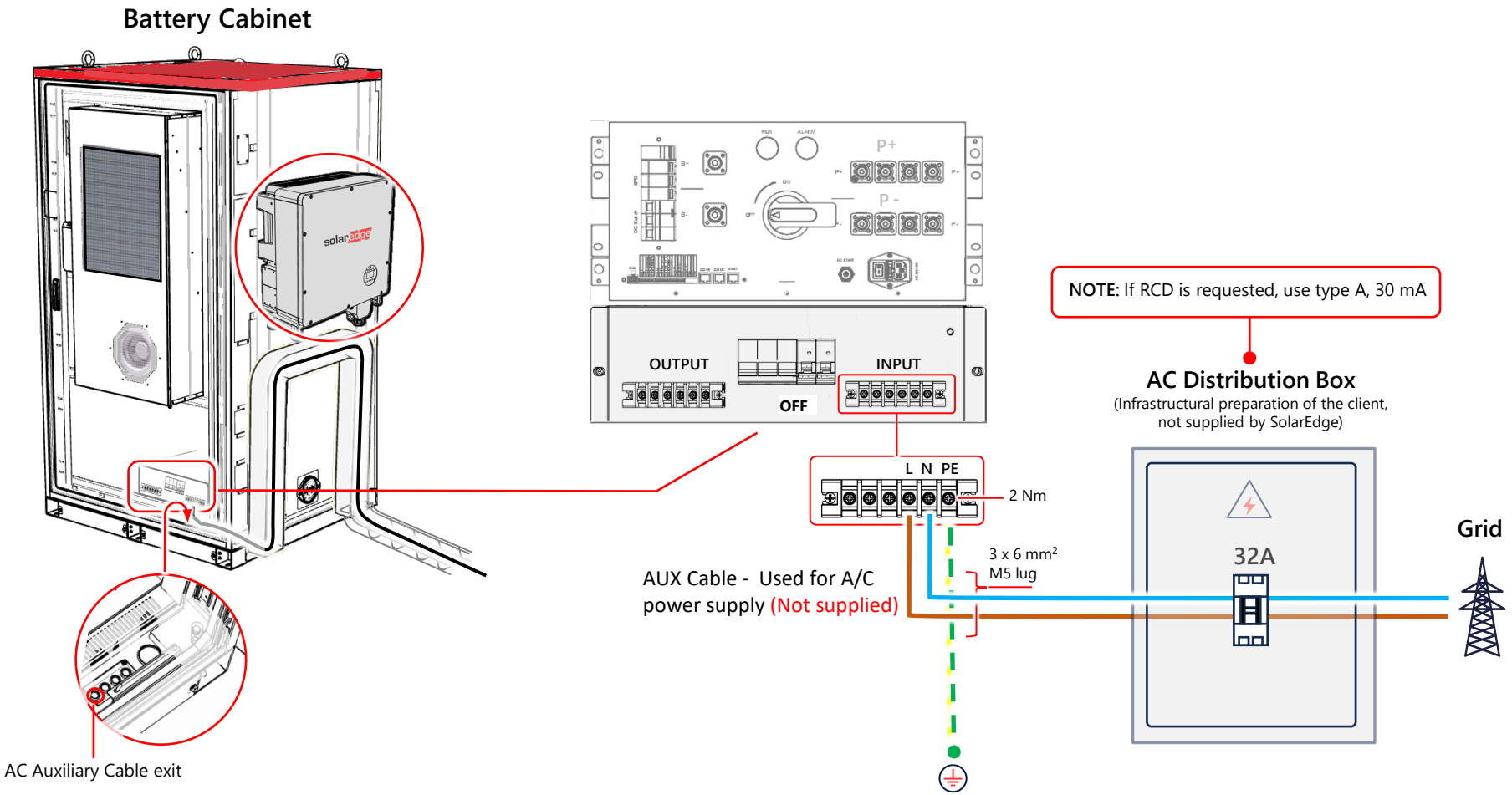
Wiring two Battery Inverters to Battery Cabinet



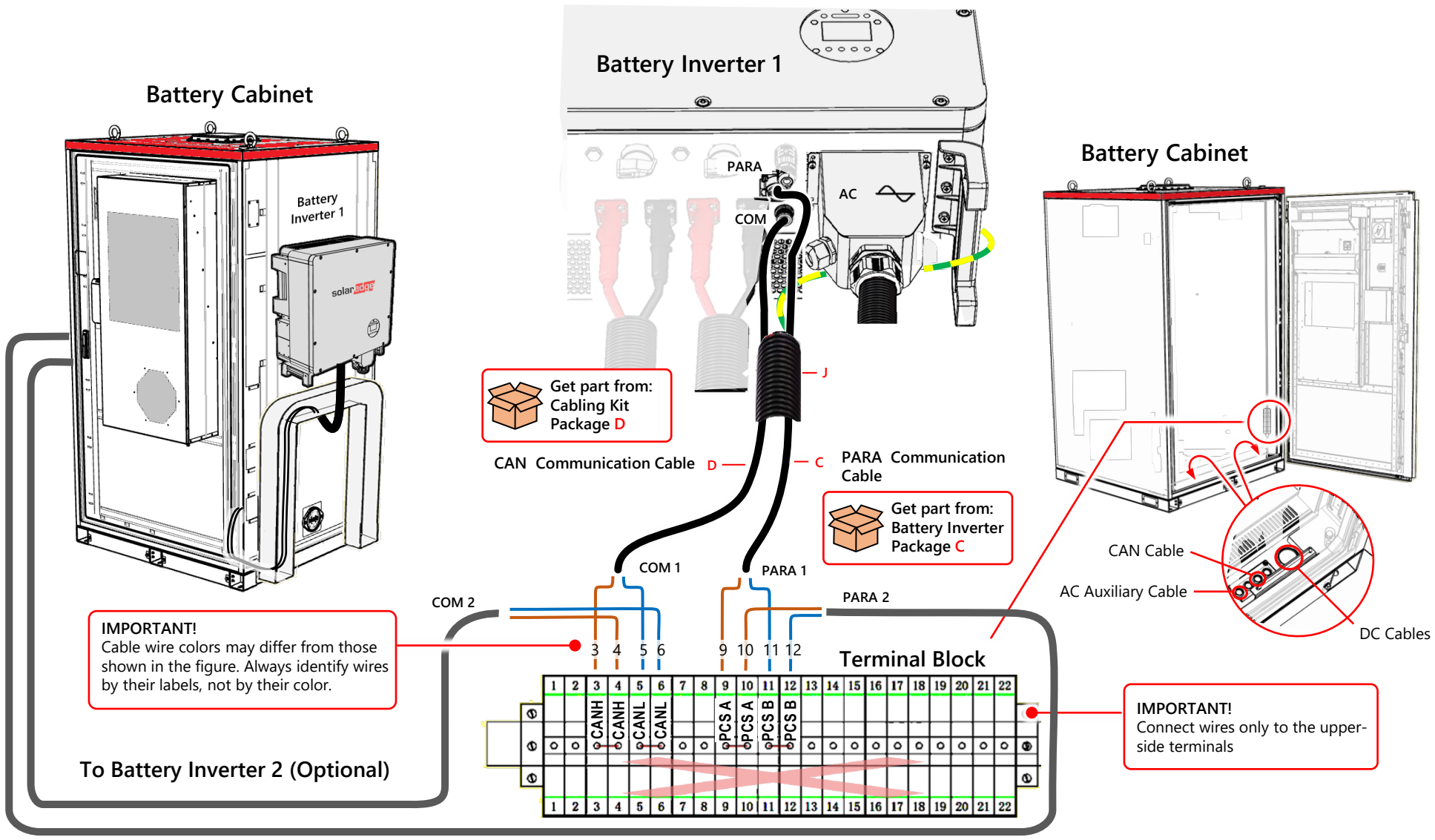
Wiring Battery Inverter(s) to Grid



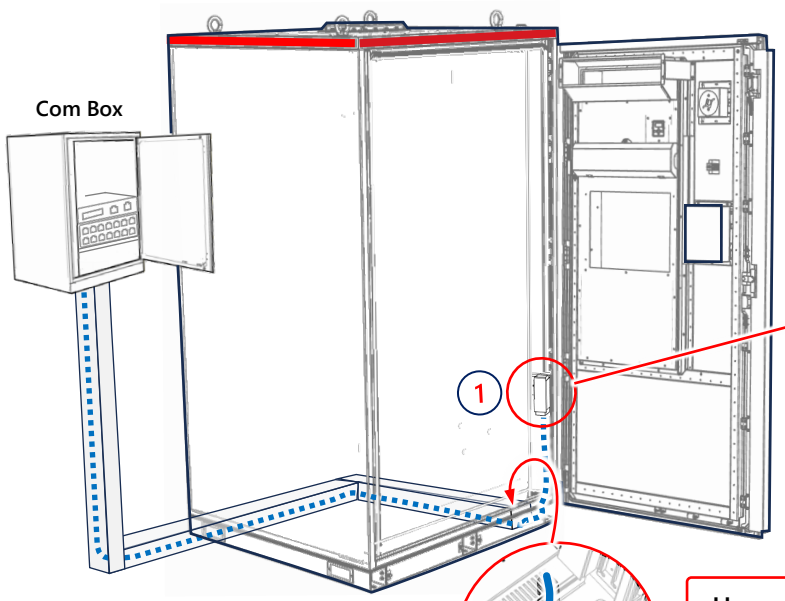
Wiring Auxiliary AC Power to Battery Cabinet HVAC

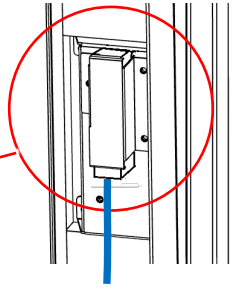


Wiring Communication between Battery Cabinet & Battery Inverter(s)



Connecting Multiple Battery Inverters to SolarEdge ONE Controller





Modbus TCP-LAN
communication cables
(Customer supplied)

SolarEdge ONE Controller

The SolarEdge ONE Controller is purchased separately and connects the battery cabinet to the cloud via a customer-provided local gateway.

Unmanaged Ethernet Switch (Customer supplied)

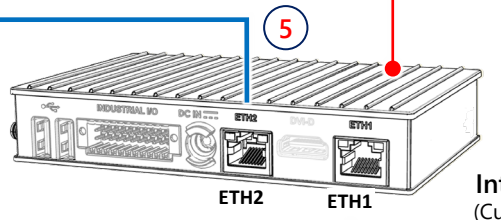
- Minimum100 Mbps (Recommended 1000 Mbps)
- Minimum 11 RJ45 ports (Recommended 16 ports)
- Recommended DIN rail mounting
- Recommended Industrial-grade switch, fanless design, with port link indications

From EMS

Up to 20 CSS-OD Cabinet Inverters

(The number of supported cabinets may depend on future product releases)





6

Internet Router

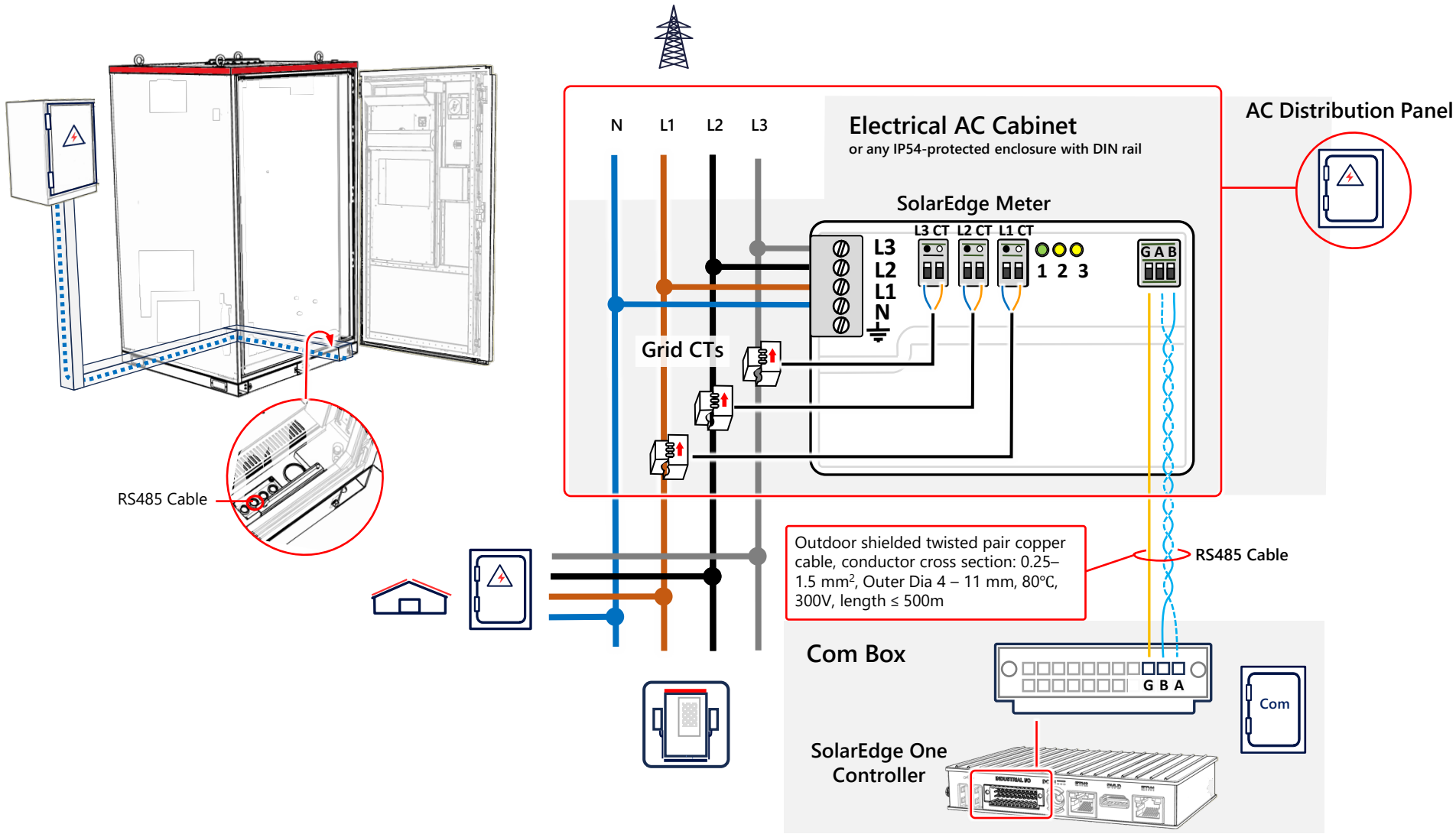
(Customer supplied)



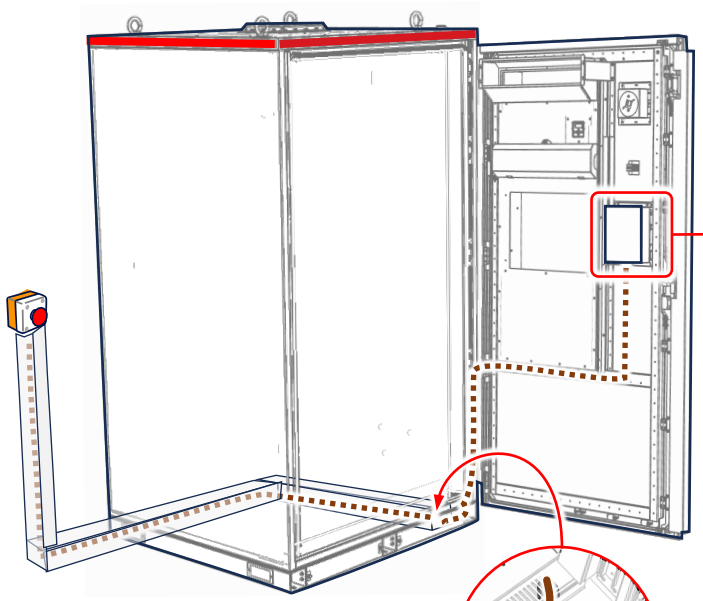
SolarEdge ONE for C&I

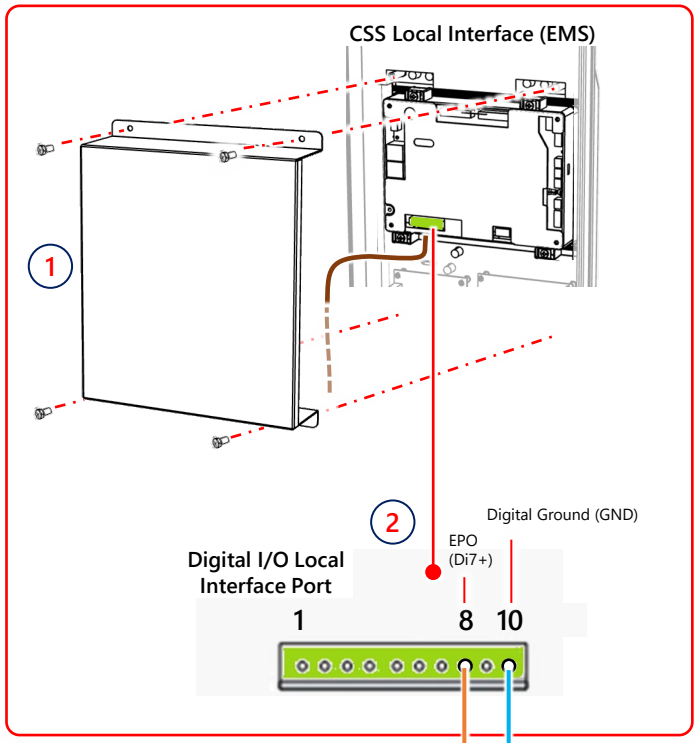
Logon to SolarEdge ONE for C&I portal and refer to User Guide to set, manage and monitor your site.

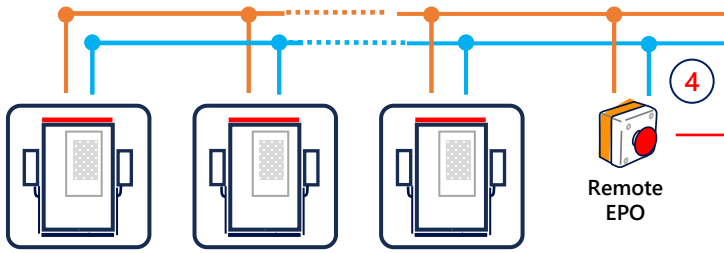
Connecting External Meter



Wiring Remote EPO Push-button to Battery Cabinets & Battery Inverters (Optional)





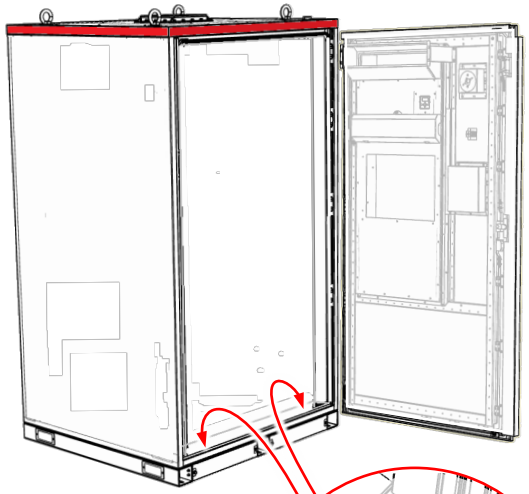


Remote EPO Requirements

- Use only a passive Normally Open (N.O) EPO push-button
- Connect the EPO in parallel to the Battery Cabinets, using pins 8 and 10 of the Digital I/O Local Interface Port of the EMS
- The EPO push-button trips the entire string of Battery Cabinets
- Recovery duration is 1 second
- Do not add any additional wiring to Battery Cabinets

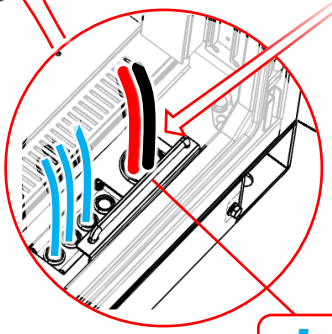
Sealing and Closing Wiring Duct Lid and Panels

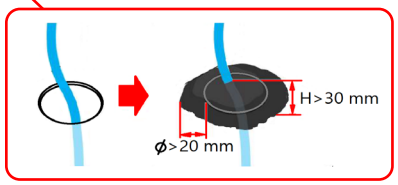
IMPORTANT! Use fire clay sealant to block the cable exit gaps and seal unused wiring holes.

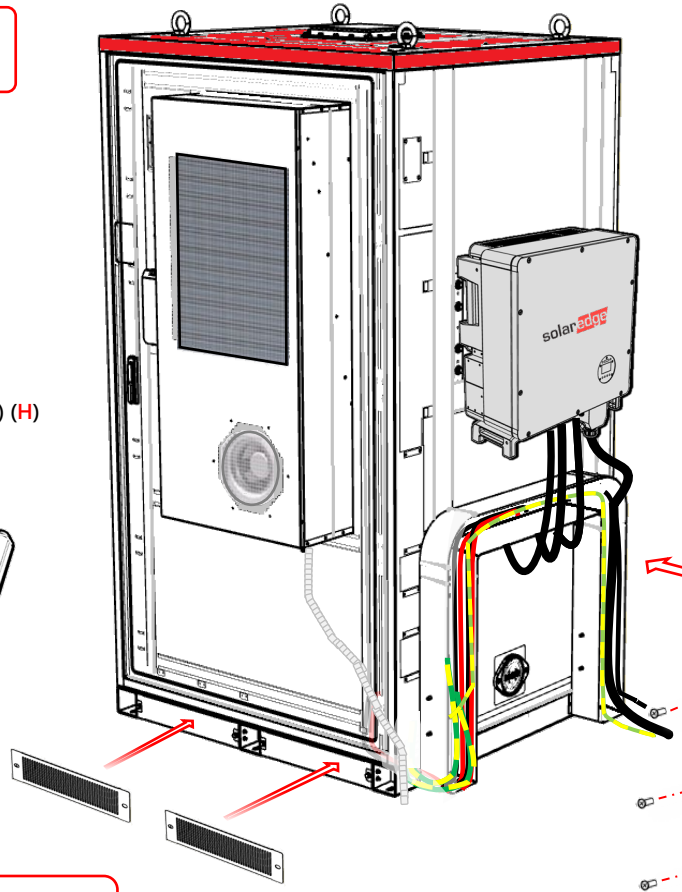


Fire Clay Sealant (x4) (H)

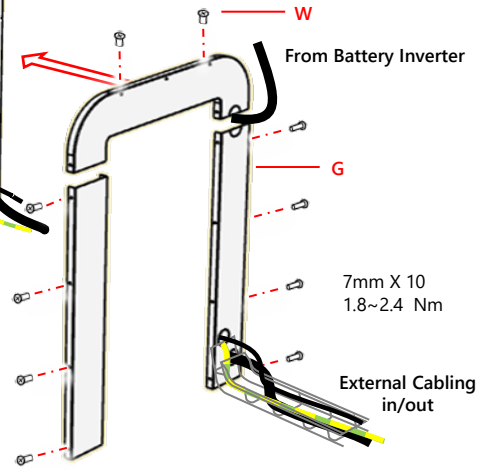






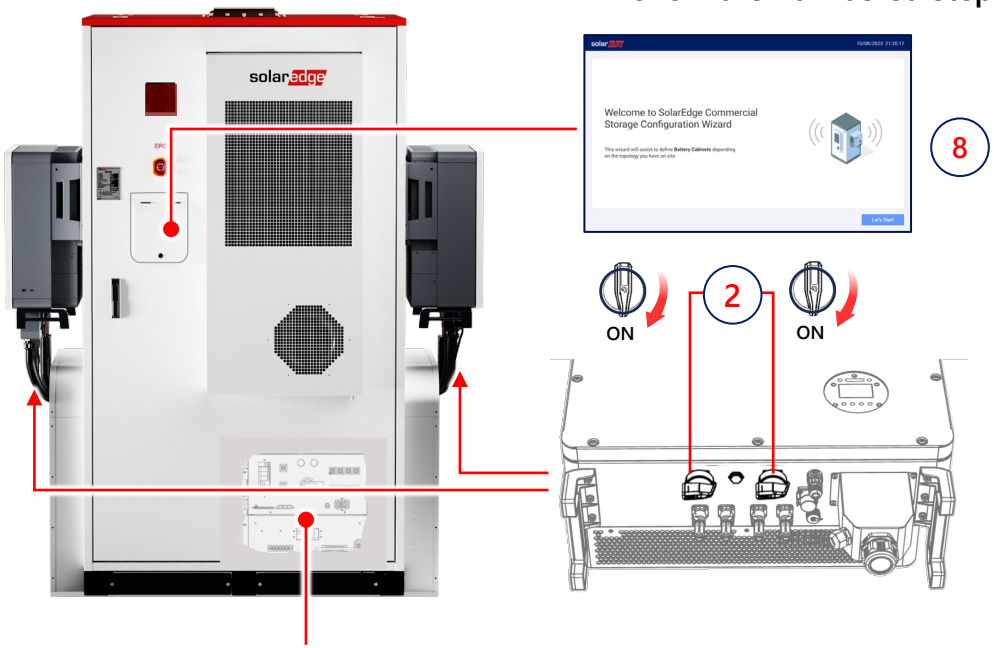


Get parts from: Battery Cabinet Package (H, G, W [Duct Cover])



Appendix A
Powering the CSS-OD

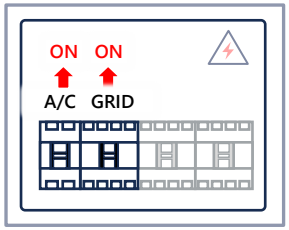
Follow the numbered steps to power on the system

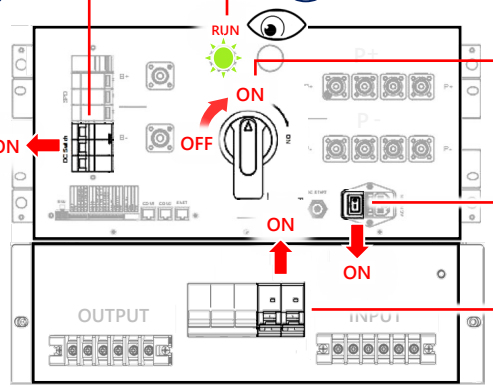


8 Validate EMS display is on

CAUTION! Before powering up the Battery Inverter, it is necessary to verify the connection of all cables and make sure they are correct and tight.

1 **AC Distribution Box**





6 **Cabinet DC Switch**

5 **RUN LED** - Validate constant green light

7 **DC Rotary Switch**

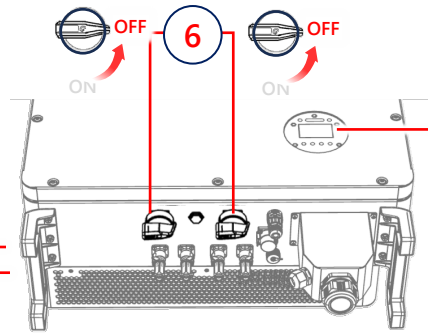
4 **Aux Poer Switch**

3 **Battery Cabinet A/C Switch**

Power Off Sequence

Follow the numbered steps to power off the system

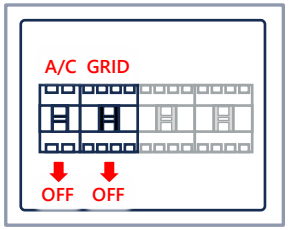




7 **LEDs**
Validate all LEDs are off

CAUTION! Before powering up the Battery Inverter, it is necessary to verify the connection of all cables and make sure they are correct and tight.

8 **AC Distribution Box**



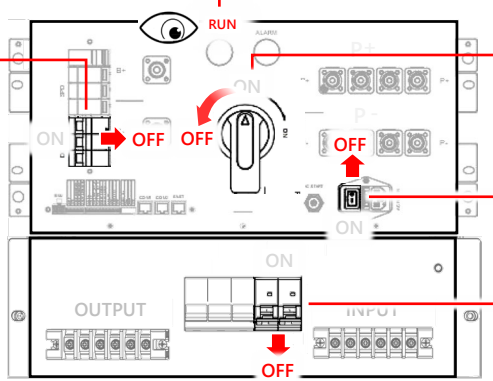
4 **RUN LED** - Validate LED is off

2 **Cabinet DC Switch**

1 **DC Rotary Switch**

3 **Aux Poer Switch**

5 **Battery Cabinet A/C Switch**



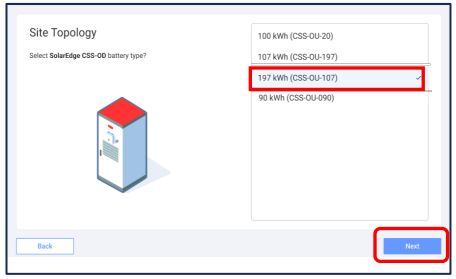
Appendix B
Commissioning

Commissioning Battery Cabinet (Single Inverter)

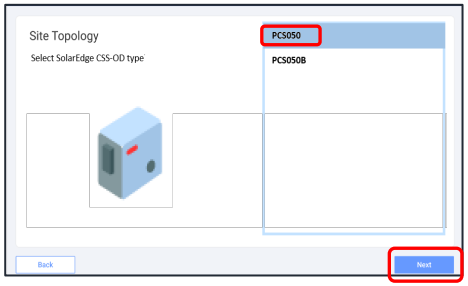
1 When the cabinet boots, it displays a Welcome screen - Tap 'Let's Start'.



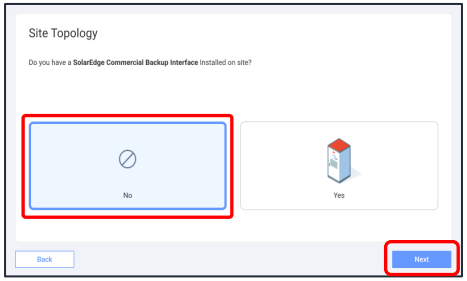
2 Select the 197 kWh and tap **Next**



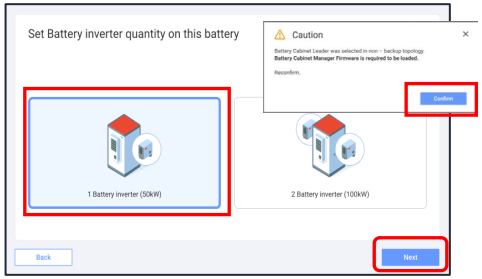
3 Select **PCS050** and tap **Next**



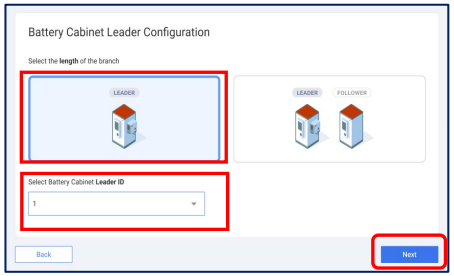
4 Select **NO** and tap **Next**



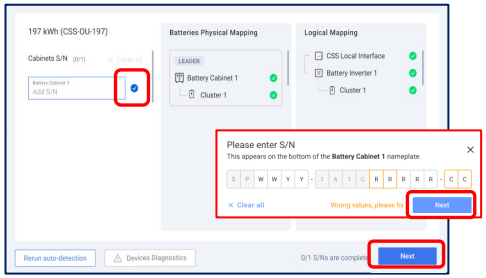
5 Select **1 battery Inverter**, then tap **Next** and **Confirm**



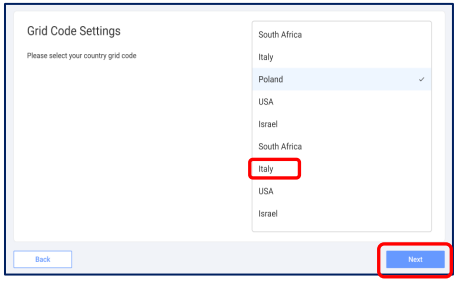
6 Select the Cabinet Leader ID=1, then tap **Next**



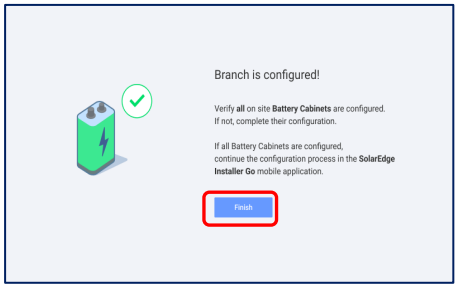
7 Check **Cabinets S/N** and enter the serial number found on the nameplate of the battery cabinet, and tap **Next**



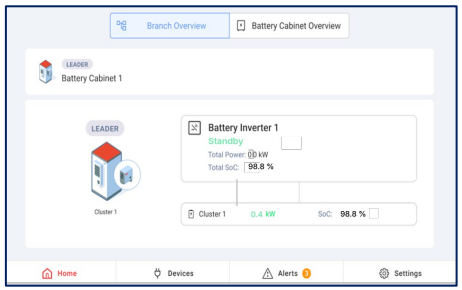
8 Select your Grid Code Setting based on your local utility requirements and tap **Next**



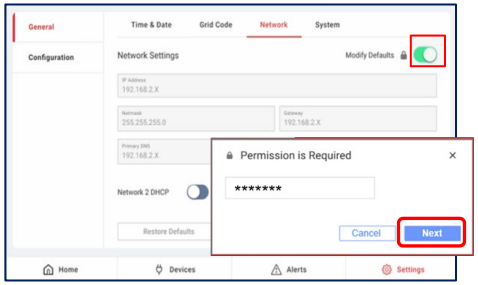
9 Tap **Finish**



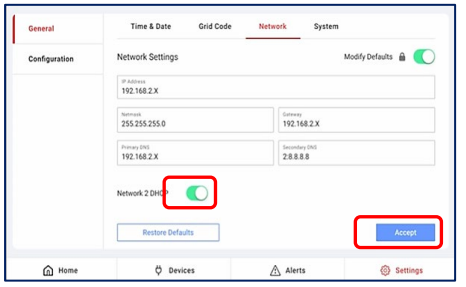
10 Verify that this screen shows.



11 Switch to **Modify Defaults**, enter the password, and tap **Next**



12 Tap **Accept**



Commissioning Battery Cabinet (Dual Inverter)

1 When the cabinet boots, it displays a Welcome screen - Tap 'Let's Start'.



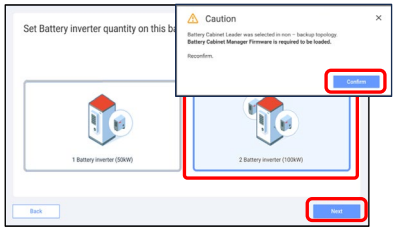
2 Select **197 kWh (CSS-OU-197)** and tap **Next**



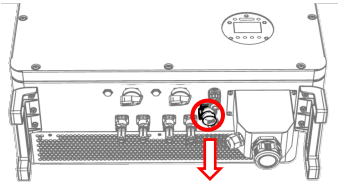
3 Select **No** and tap **Next**



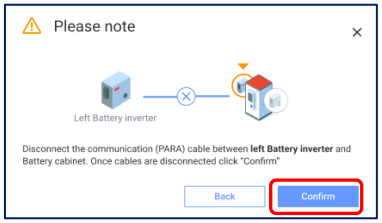
4 Select **2 battery Inverter (100kW)**, then tap **Next** and **Confirm**



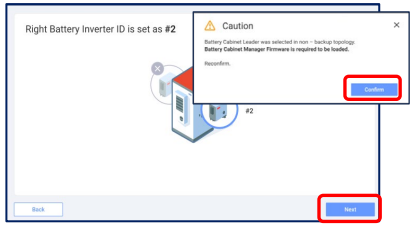
5 Disconnect the **PARA** cable of the left inverter. The system will assign ID 2 to the right Inverter



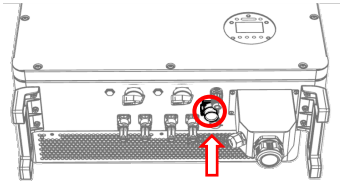
6 Tap **Confirm**



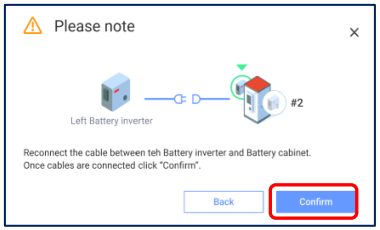
7 Tap **Next** and then **Confirm**



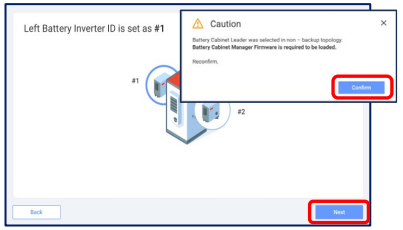
8 Reconnect the **PARA** cable of both Inverters. The system will assign ID 1 to the left Inverter



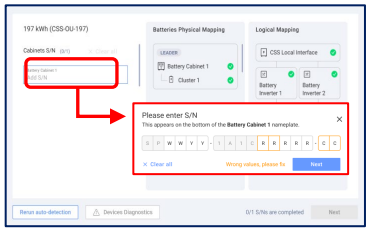
9 Tap **Confirm**



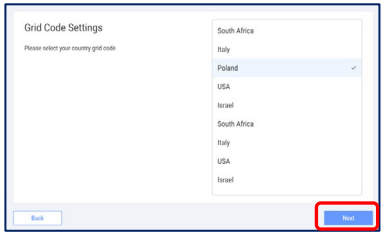
10 Tap **Next**



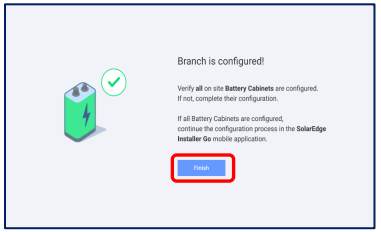
11 Enter the serial number found on the nameplate of the battery cabinet and tap **Next**



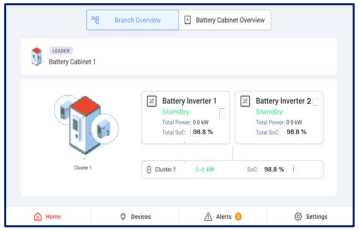
12 Select your Grid Code Setting based on your local utility requirements, then tap **Next**



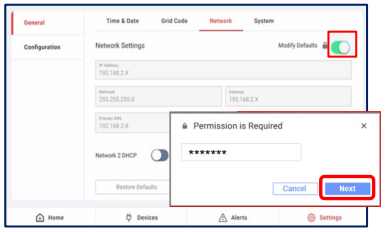
13 Tap **Finish**



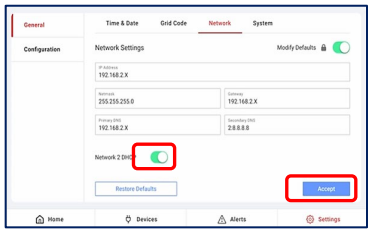
14 Verify that this screen shows.



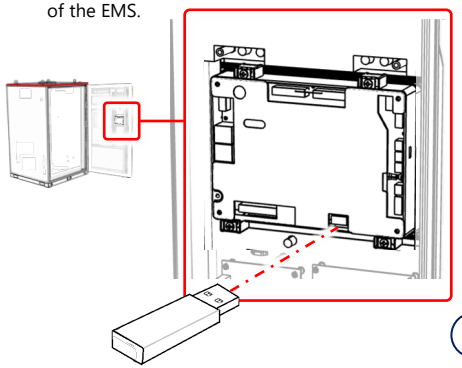
15 Switch to **Modify Defaults**, enter the password, and tap **Next**



16 Tap **Accept**



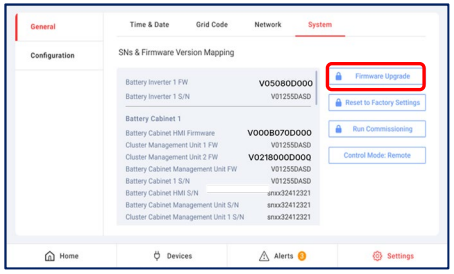
1 Contact SolarEdge support to download a firmware upgrade file to a USB flash drive. Insert the drive into the USB port on the back of the EMS.



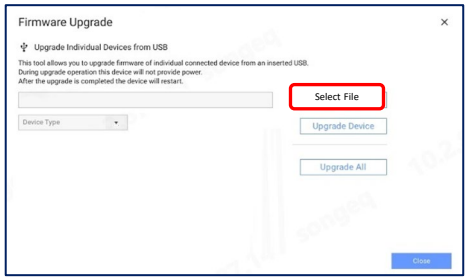
IMPORTANT!

- The capacity of the USB flash drive must be exactly 32 GB.
- The flash drive must be formatted using the FAT32 file system.
- Download the .7zip file from the URL provided by SolarEdge Support directly to the root directory of the USB flash drive and unzip the file.

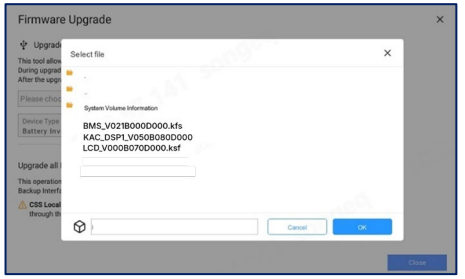
2 Tap **General** > **System** > **Settings** > **Firmware Upgrade**



3 Tap **Select File**



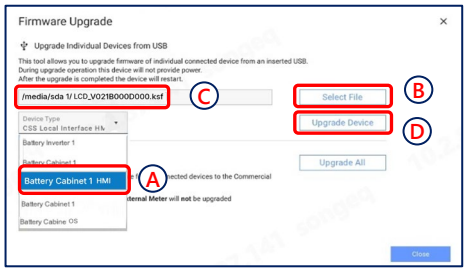
4 Tap on a single file and **OK**



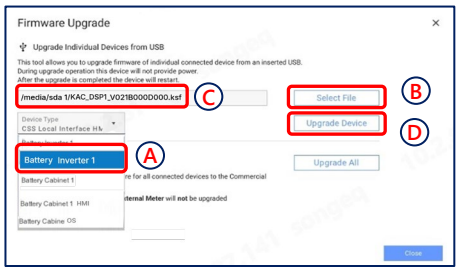
5 To upgrade the Energy Module Management Unit: A. From the **Device Type** menu, select: **Battery Inverter 1** > B. Tap **Select File** and select the **BMS_xxxx** file> C. The file will appear on the screen > D. Tap **Upgrade Device**



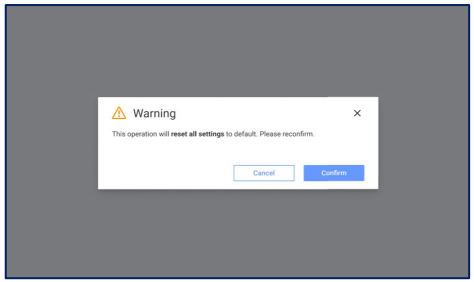
6 To upgrade the CSS Local Interface Display: A. From the **Device Type** menu, select: **Battery Inverter 1** > B. Tap **Select File** and select the **LCD_xxxx** file> C. The file will appear on the screen > D. Tap **Upgrade Device**



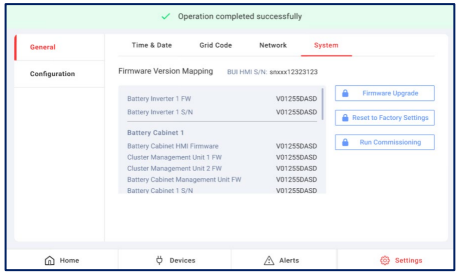
7 To upgrade the Inverter: A. From the **Device Type** menu, select: **Battery Inverter 1** > B. Tap **Select File** and select the **KAC_DSP1xxxx** file> C. The file will appear on the screen >D. Tap **Upgrade Device**



8 Tap **Confirm**

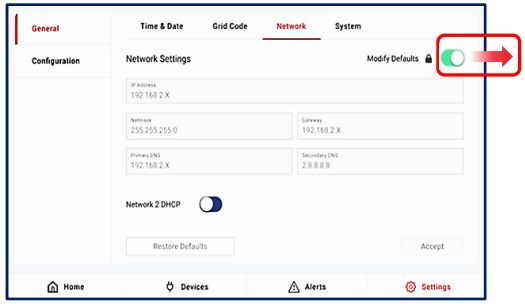


9 The **Operation completed successfully** screen will show after restart

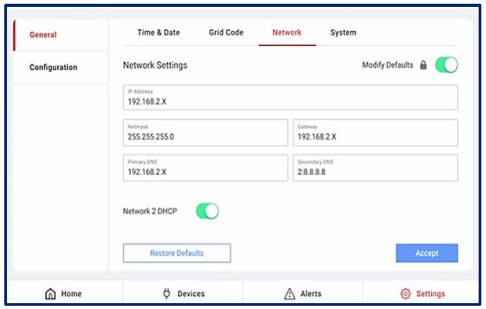


Setting Communication and Activation

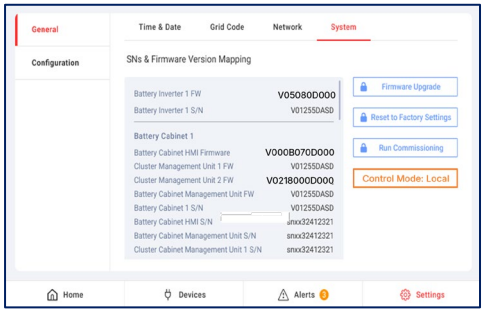
1 Tap: **General** > **Network** > **Settings** and turn on the **Modify Defaults** switch



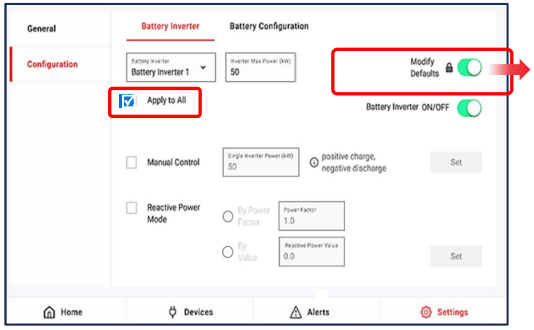
2 Tap **Accept**



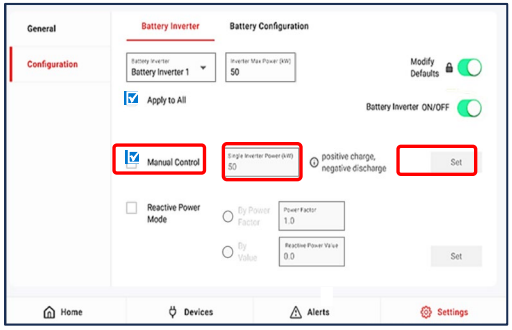
3 Tap **Settings** > **General** > **System** > **Control Mode: Local**



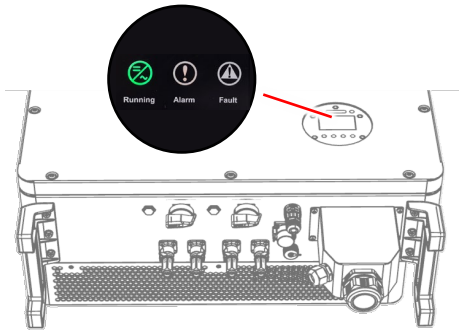
4 Tab the **Battery Inverter ON/OFF to NO** > and check **Apply All**



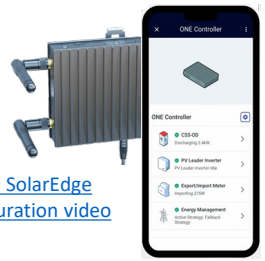
5 Check **Manual Control, set charge/discharge power,** and tap **SET** to test the battery



6 Verify that the Inverter LED display is powered on and shows **Running**



6 Install SolarEdge Go for SolarEdge ONE Controller for C&I Configuration



Watch the commissioning and SolarEdge ONE Controller for C&I Configuration video

Appendix C
Troubleshooting and Maintenance

Troubleshooting

IMPORTANT NOTE: For viewing account-level alerts, showing all alerts raised in all sites of the account, and site-level alerts showing all alerts raised in a specific site, refer to: https://knowledge-center.solaredge.com/sites/kc/files/se-alerts-in-monitoring-application-note.pdf

Fault Description	Possible Cause	Corrective Action
Grid Overvoltage	Grid voltage above permissible limit	• Check Grid Code settings • Check grid voltage with a multimeter. • Contact utility provider if voltage remains high.
Grid Undervoltage	Grid voltage below permissible limit	• Verify connection at AC terminals. • Check for utility fluctuations or loose wiring.
Grid Frequency Error	Frequency outside 50/60 Hz ±0.5 Hz	• Confirm local grid frequency stability. • Wait for automatic reconnection once frequency normalizes.
Insulation Resistance Fault	Low insulation resistance detected on DC side	• Check for good earth resistance of BT+ and BT– battery terminals is greater than 2 MΩ. • Replace defective module or cable.
Ground Fault	Leakage current detected	• Inspect for damaged cables or moisture ingress. • Dry the system and re-test insulation.
Temperature Overheat	Inverter temperature exceeds safe limit	• Ensure ambient temperature is within range. • Clean heat sink and check for blocked airflow. • Verify fan operation (if equipped).
Communication Failure	Lost connection with SolarEdge ONE system	• Check communication wiring and connectors. • Verify that SolarEdge ONE Controller is powered. • Verify that your site router is powered and connected to the internet.

Maintenance

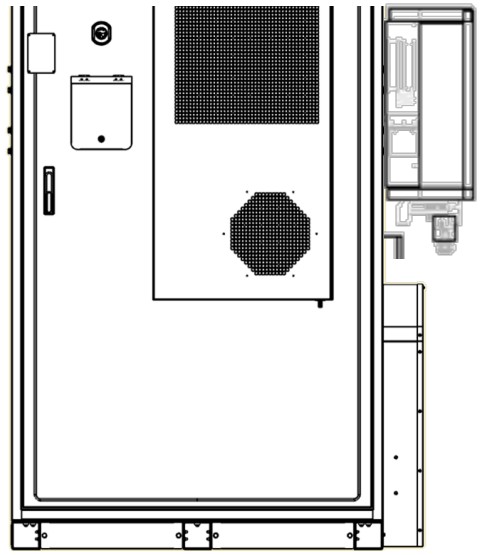
NOTE: For CSS-OD routine maintenance guide, refer to: https://knowledge-center.solaredge.com/sites/kc/files/se-css-od_197kwh-routine-maintenance-guide.pdf

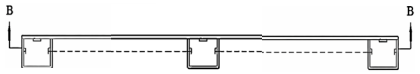
Battery Inverter LED Indications

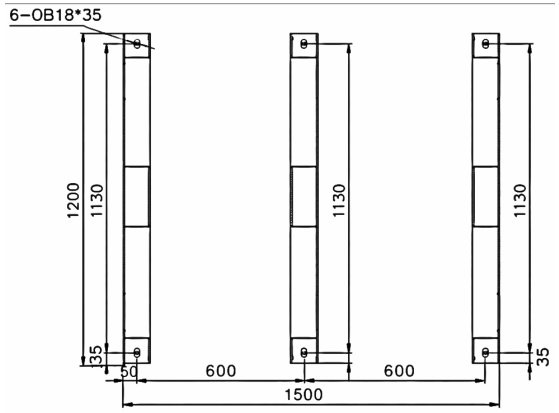
LED Indication(s)		Description
All LEDs are Off		The battery inverter is powered off
Steady Green		Standard operation
Flashing Yellow and steady Red		Self-test
Steady Yellow and steady Red		Standby mode
Steady		Faulty Inverter (Contact support)
Flashing Red		Severity level: Inverter fault (Contact support)
Steady Green and flashing Yellow		Normal operation; state of charge approaching 100% or 0%

Appendix D
Construction Details

Battery Cabinet Mounting Stand Production Guidelines







Technical Requirements:

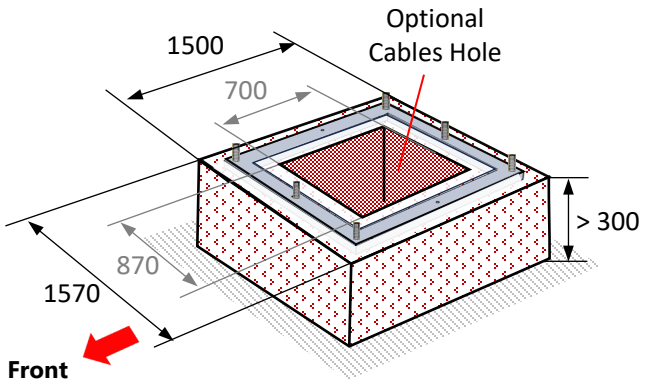
1. Solid welding, no virtual welding.
2. After welding, except for welding slag, the outer surface of the parts is polished and smooth.
3. Spray protection according to the requirements of the drawing; all stud end faces and threads need spray protection.
4. No dimensioned tolerance according to GB/T 1804-M processing.
5. The unmarked position tolerance shall be executed in GB/T 1184-K class.
6. With* number is an important size, need to focus on inspection.
7. For other dimensions not specified, refer to the 2D/3D drawing.

Battery Cabinet Concrete Platform Base Guidelines

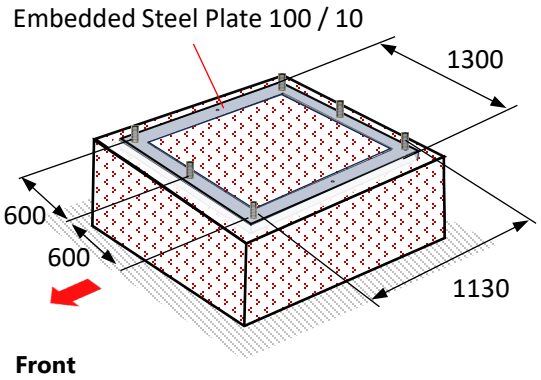
IMPORTANT NOTES!

1. Battery Cabinet must be installed on a reinforced concrete platform base.
2. Dig a trench or reserve a cable entry hole by considering the electrical wiring of the equipment before construction of the foundation.
3. The foundation must be made of non-combustible materials.
4. The bearing capacity of the foundation shall be > 3 tons.
5. When designing and manufacturing the embedded steel plates for the battery cabinet, it is necessary to consider that there must be a reliable connection (reinforcement hook) between the embedded steel plate and the concrete base.
6. When molding the concrete pad, it shall protrude below the ground to a minimum of 700 mm.
7. To avoid flood damage and safety hazards, the cabinet must be installed on a concrete platform with a minimum height of 300 mm. Concrete base surface smoothness shall be ≤ 3mm.
8. The upper surface tolerance of the foundation shall be ±5mm.
9. The concrete pad shall prevent rainwater accumulation on top of it. The foundation construction should meet the drainage requirements for maximum volume of rainfall in the locality, and the discharged water needs to be treated in accordance with local laws and regulations.
10. The foundation drawing is only for reference and cannot be regarded as the final construction drawing. Operators shall recheck the basic parameters according to the environment, geological conditions, seismic requirements, etc. of the installation site.

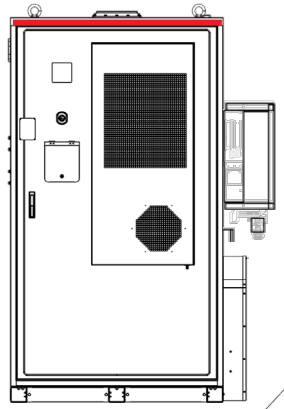
Concrete Platform Base

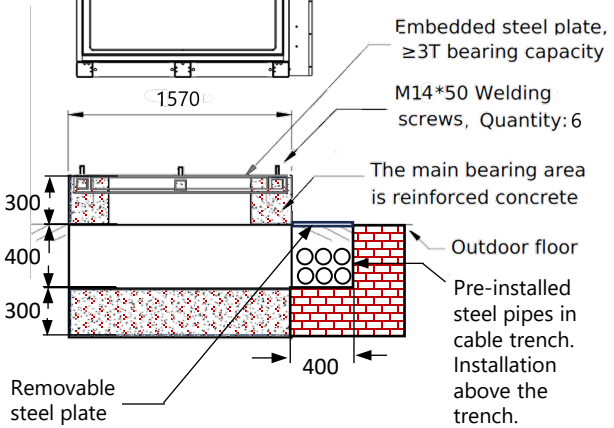


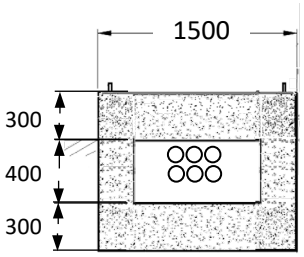
Embedded Steel Plate with Studs



All dimensions are in mm







Support Contact Information
If you have technical problems concerning SolarEdge products, please contact us:
https://www.solaredge.com/service/support

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