

Schneider Boost

Battery, 10 kWh

BAT10K1

Installation and Operation Guide



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Contact Information

For country-specific details, please contact your local Schneider Electric Sales Representative or visit the Schneider Electric website at: <https://www.se.com/>

Warranty

The Schneider Boost must be registered within 30 days of installation with the accompanying electrical installation certificate information.

Information About Your System

As soon as you open your product, inspect the contents and record the following information and be sure to keep your proof of purchase. If any damage is found, contact customer support.

Serial Number _____ Purchased From _____
Product Number _____ Purchase Date _____

Document Number: TME12665C

Date: October 2024

Information on Non-Inclusive or Insensitive Terminology

As a responsible, inclusive company, Schneider Electric is constantly updating its communications and products that contain non-inclusive or insensitive terminology. However, despite these efforts, our content may still contain terms that are deemed inappropriate by some customers.

Validity Note

This document is valid only for the Schneider Boost (BAT10K1).

If this manual is in any language other than English, although steps have been taken to maintain the accuracy of the translation, the accuracy cannot be guaranteed. Approved content is contained with the English language version which is posted at <https://www.se.com/>.

The characteristics of the products described in this document are intended to match the characteristics that are available on <https://www.se.com/>. As a part of our corporate strategy for constant improvement, we may revise the content over time to enhance clarity and accuracy. If you see a difference between the characteristics in this document and the characteristics on <https://www.se.com/>, consider <https://www.se.com/> to contain the latest information.

Safety Information

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install or operate it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label 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 that follow this symbol to avoid possible injury or death.



Stored energy hazard and discharge time



Fire hazard



Protective Earth (grounding) conductor terminal



Refer to the Installation or Operation instructions

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed only 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. For more information, see "Audience" on page 6.

Audience

This manual is intended for use by qualified personnel installing, configuring and operating a system involving the Schneider Boost. Certain installation and configuration tasks should only be performed by qualified personnel in consultation with your local utility and/or an authorized dealer. Electrical equipment should be installed only by qualified personnel. Qualified personnel have training, knowledge, and experience working with Li-Ion batteries. Keep unqualified personnel away from batteries.

Qualified personnel have training, knowledge, and experience in:

- Installing electrical equipment.
- Applying all applicable installation codes.
- Analyzing and reducing the hazards involved in performing electrical work.
- Installing and configuring inverters and Li-Ion batteries.
- Selecting and using Personal Protective Equipment (PPE).

Qualified personnel have also received specific training from the manufacturer on installing and operating the Schneider Boost.

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Purpose

This document describes the steps for installing and operating the Schneider Boost.

Related Information

For more information about the Schneider Boost or compatible equipment, go to <https://www.se.com/> or [Schneider Boost Installation Guide \(TME12665\)](#).

Abbreviations and Acronyms

AC	Alternating Current
BMS	Battery Management System
CAN	Controller Area Network
DC	Direct Current
LFP	Lithium Iron Phosphate
PPE	Personal Protective Equipment
PV	Photovoltaic
RSD	Rapid Shutdown

Product Safety Information

READ AND SAVE THESE INSTRUCTIONS - DO NOT DISCARD

Before installing, uninstalling, or operating the battery, read all instructions and cautionary markings on the unit, and all appropriate sections of the .

IMPORTANT: Refer to your warranty for instructions on obtaining service.

DANGER

HAZARD OF ELECTRIC SHOCK AND ARC FLASH

- This equipment must only be installed, uninstalled and serviced by qualified electrical personnel.
- Use appropriate personal protective equipment (PPE) and follow safe electrical work practices according to NFPA 70E or CSA Z462.
- Equipment energized from multiple sources including PV, AC, and additional batteries. Before removing covers identify all sources, de-energize, lock-out, and tag-out and wait five minutes for circuits to discharge.
- To turn the battery(ies) off: On all batteries, press the Power button for six seconds, and turn the disconnect switch to the OFF position.
- Verify de-energization with a voltage sensing device, rated 600 V or higher.
- Never energize the system or turn the battery disconnect switch(es) to the ON position with the wiring or fuse access covers removed.

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

DANGER

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

- Do not remove the fuse access cover. Access is restricted to personnel authorized by Schneider Electric.
- Prior to servicing the fuses, authorized personnel must verify that all fuse terminals are de-energized, using the probe holes on the internal fuse cover.
- Replace the Schneider Boost fuses only with 60 A, 700 VDC fuses: Mersen MEV70V60-S.

Arc Flash Information for Fuse Servicing:

- **18.4 cal/cm²** Incident Energy at a Working Distance of 18 in.
- **5 ft 9 in.** Arc Flash Boundary

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

  **DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- This equipment must only be disassembled or recycled by qualified personnel.
- Do not attempt to open, disassemble, repair, tamper with, or modify the battery. The battery cells are not replaceable.
- Do not drop, deform, impact, cut or spear with a sharp object. Damage to this equipment may cause electrolyte leakage.
- Do not dispose of the Schneider Boost in a fire or with general household waste. Always follow local guidelines for recycling and disposal.
- Do not immerse the equipment or its components in water or other fluids.

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

  **DANGER**

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

This equipment is not ignition protected. To prevent fire or explosion, do not install this product in locations that require ignition-protected equipment. This includes any confined space containing lead acid batteries or flammable chemicals such as natural gas (NG), liquid petroleum gas (LPG), or gasoline (Benzine/Petrol).

- Keep sparks and flames away from the batteries.
- Do not install in a confined space with machinery powered by flammable chemicals.
- Do not store flammable liquids or gasses near the battery. When the battery is installed outdoors, keep flammable liquids or gasses at a distance of at least 50 ft (15 m) from the battery.
- Do not install the battery near readily flammable materials such as cloth, paper, straw, or plastic sheeting. Keep flammable materials a minimum distance of 12 in (30 cm) from the battery.
- Do not install the battery on a combustible surface.
- In case of fire, only ABC or dry chemical fire extinguishers can be used. DO NOT use liquid fire extinguishers. A fire extinguisher must be installed with the battery.
- Smoke detectors must be installed in the residence in accordance with building, fire and installation codes.

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

 WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- If there are any signs of smoke, unusual smell, or excessive heat coming from the Schneider Boost, evacuate the area and call local emergency response teams.
- In case of a flood: If any part of the battery or wiring is submerged, stay out of the water.

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

 WARNING

RISK OF EXPLOSION, FIRE, PERSONAL INJURY, OR EQUIPMENT DAMAGE

Boost batteries have been evaluated per the UL9540A standard for residential use.

- The Schneider Boost must be installed only on exterior walls, or walls of indoor non-habitable spaces, which may include attached and detached garages, sheds, utility closets, and basements, and locations more than 152.4 cm (5 ft) from dwelling units, where permitted in the applicable installation codes.
- The Schneider Boost is not intended for installation in habitable spaces and livings spaces in dwelling units, including bathrooms, toilet rooms, closets, halls, and storage spaces.
- If you have multiple batteries, supported by more than one inverter, the maximum kWh of batteries that can be co-located in an area may not exceed local installation codes.

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

 WARNING

HAZARD OF ELECTRIC SHOCK

Equipment ground terminals must be reliably connected to ground by appropriately sized grounding conductors, as described in this document. Comply with national and local codes for specific grounding and bonding requirements.

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

 WARNING

HAZARD OF ELECTRIC SHOCK, ARC FLASH, AND FIRE

Always check for proper crimping and tightening when assembling the battery's power cables and connectors.

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

 **WARNING**

RISK OF EXPLOSION, FIRE, PERSONAL INJURY, OR EQUIPMENT DAMAGE

- The Schneider Boost weighs approximately 280 lbs (127 kg). A lifting device must be used to lift the Schneider Boost. In addition to a lift device, two people are required to position the battery.
- Always use straps to tie the Schneider Boost to the hand truck.
- Verify that the handle threads are not crossed during installation, and that the handles are tightened so that they will not turn or come loose during use.
- For structural and seismic stability, the Schneider Boost must be mounted onto a vertical supporting surface strong enough to support the Schneider Boost, with the Schneider Inverter and any other equipment that is installed on the same surface. For drywall surfaces, the mounting bracket must be secured to studs for both floor mount and wall mount installations, following the instructions in this guide. Do not attempt to anchor to drywall.
- The mounting hardware must be suitable for the weight of the product.
- Do not mount the Schneider Boost onto metal studs.
- For front-to-back multi-battery installations, batteries must be floor mounted.
- For floor mounting, only install the Schneider Boost on a flat, even, concrete surface that is free from any potential risks that may harm the battery (such as flooding or vehicular movement). The floor must be able to withstand a minimum weight of 300 lbs per square foot.
- Floor or pad mounted installations must also be secured to the wall (for single and stacked battery configurations), as defined in this manual.

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

 **WARNING**

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

Thoroughly inspect the Schneider Boost prior to energizing. Verify that no tools or materials have inadvertently been left inside the Schneider Boost, and that all access covers of all installed batteries are properly closed and secured.

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

  WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR EQUIPMENT DAMAGE

- The battery must only be used with a compatible Schneider Inverter (**HY8K1NA1**).
- Before energizing, make sure that all Schneider Boost batteries in the system are installed and that the conductors are properly terminated.
- Power and communication cables must use waterproof conduit and conduit fittings per NEC guidelines.

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

  WARNING

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

- Before powering on equipment, verify that all wiring is in good condition and that wire is not undersized. Do not operate the battery with damaged or substandard wiring.
- Do not operate the battery if it appears to be damaged in any way.
- Use only compatible accessories that are recommended by the manufacturer.

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

  WARNING

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

For front-to-back mounting:

- Keep metal filings from coming into contact with any terminals. Before punching conduit holes in the Schneider Boost for front-to-back mounting, make sure that the caps are installed on all communication and power ports in the Schneider Boost.
- To reduce the amount of metal filings, use a 1 1/4 in. knockout hole punch tool to cut the conduit hole.
- Clean all metal filings out of the Schneider Boost before turning the battery system on.
- Cut hole edges must be sealed to help protect against corrosion formation, using a Schneider Electric-approved Zinc-rich paint marker (Zinc-Pro™ Galvanizing Touch-Up Marker (ASTM-A780-01), or equivalent).

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

NOTICE

RISK OF EQUIPMENT DAMAGE

Before making the final DC connection or closing the battery disconnect, check cable polarity at both the battery and the inverter. The positive (+) terminal in the Schneider Boost must be connected to inverter's positive (+) battery terminal. The negative (-) terminal in the Schneider Boost must be connected to the inverter's negative (-) battery terminal.

Failure to follow these instructions can result in equipment damage.

NOTICE

RISK OF EQUIPMENT DAMAGE

- Always store the battery in a dry location, where the ambient temperature is between 14°F to 104°F (-10°C to 40°C).
- The Schneider Boost must be installed and energized by the "Must Energize By" date on the packaging box label.
- After installation, the Schneider Boost can be shut down temporarily for a maximum of one month.
- To prepare the Schneider Boost for temporary shutdown, the DC Disconnect switch on each battery must be in the OFF position.

Failure to follow these instructions can result in equipment damage.

IMPORTANT: If the storage instructions above are not followed, the warranty may become void.

NOTICE

RISK OF EQUIPMENT DAMAGE

During installation, ensure that you do not scratch the paint on the Schneider Boost battery:

- Do not move the batteries without proper lifting equipment, as this could result in paint surface scratches, which can lead to corrosion.
- If the protective paper cover is installed at the foot of the battery, do not remove it from the battery until the battery can be placed directly onto the mounting bracket.

Failure to follow these instructions can result in equipment damage.

NOTICE

RISK OF EQUIPMENT DAMAGE

- Do not install in an area prone to flooding or other sources of water.
- The Schneider Boost's rated operating temperature range is 5°F to 122°F (-15°C to 50°C), and the recommended temperature range is 32 to 86°F (0 to 30°C). Installing the Schneider Boost in an environment that is frequently outside of the recommended temperature range may lead to a reduced life cycle.
- If installed outdoors, it is recommended to install the Schneider Boost under a shade.

Failure to follow these instructions can result in equipment damage.

NOTICE

RISK OF EQUIPMENT DAMAGE

- A maximum of three Schneider Boost batteries can be installed per inverter.
- Do not install the Schneider Boost with other types of batteries.

Failure to follow these instructions can result in equipment damage.

Potential Exposure to BPA

Attention: The Schneider Boost has components that contain bisphenol A (BPA), which is known to the State of California to cause cancer, birth defects, and other reproductive harm. For more information, go to <https://www.p65warnings.ca.gov/>.

1 Introduction

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Overview

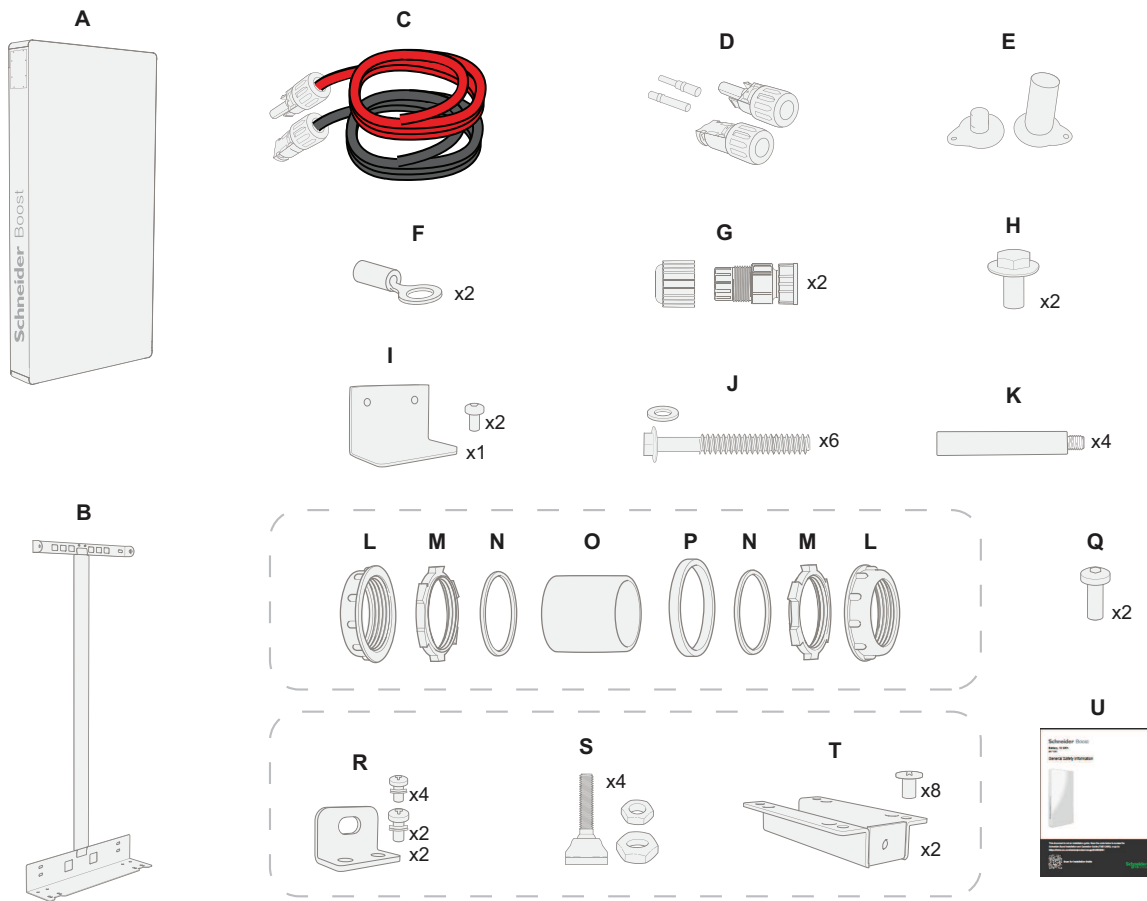
Schneider Boost is a high voltage, Lithium Iron Phosphate (LFP) battery storage system. It includes an integrated Battery Management System (BMS), and battery disconnect switch. It is intended for residential applications including energy management and backup power. The Schneider Boost is required to be installed with the Schneider Inverter in all cases, and for backup power, a Schneider Electric compatible Backup Controller is also required. When installed together, the Schneider Boost and Schneider Inverter can be configured and monitored remotely, using the Schneider Installer Portal (qualified personnel) or Schneider Home mobile app (home owners).

Note:

- When designing your system, ensure that only compatible part numbers are selected, as described in the Schneider Inverter and Boost manuals.
- Obtain all necessary permits prior to starting the installation. Installations must meet all local codes and standards.
- Before installing the Schneider Boost, check it over for any signs of shipping damage. If any damage is found, contact Technical Support.

What's in the Box

Figure 1 What's in the box



A	Schneider Boost	L	Bushing
B	Wall mounting bracket	M	Lock nut
C	Power cables (red + and black -) with H4S connectors, 600 V, 9.8 ft (3 m)	N	O-ring
D	Amphenol Amphe-PV H4 Plus™ connectors and pins	O	Conduit
E	Power cable (H4S) end caps (pre-installed on H4S connectors)	P	Spacer
F	Ring terminal for ground cable, M6	Q	Ground screw, Phillips, M6 (pre-installed on grounding nut)
G	RJ-45 waterproof connector	R	Footrest locator bracket and SEMS screws, M5 (2), M4 (4)
H	Flanged bolt (mounting bracket to battery), M8	S	Footrest and nuts
I	Inverter alignment bracket	T	Footrest mounting bracket and Torx screws, M5
J	Hex head bolt, 5/16 × 3" and washer for mounting bracket (wood only)	U	Safety Information
K	Handle		

Required Communication Cable and Connector

The following communication cable and connector (or equivalent) are required. Only one cable is required for single-battery installs. More are required for multi-battery installs (see Wiring a Dual or Triple Battery System on page 64).

Table 1 Required communication cable and connector

Type	Required specifications	Example
Communication cable	<ul style="list-style-type: none"> ▪ The cable's wiring must be straight-through, not crossover. ▪ 600 V ▪ Shielded Cat 5e ▪ Multi-conductor, 4-twisted pair cable ▪ RJ45 connector with insulation diameter range of 3/64 to 1/32 in. (1.07 to 1.12 mm) ▪ Cable jacket diameter must be \leq 1/4 in. (6.8 mm) ▪ Conductor insulation diameter must be \leq 1/32 in. (1.12 mm) 	<p>BELDEN 7958A DataTuff® (or equivalent)</p> <p>For more information, see https://www.belden.com/</p>
<p>Note: For assembly information, follow instructions from the manufacturer.</p>		

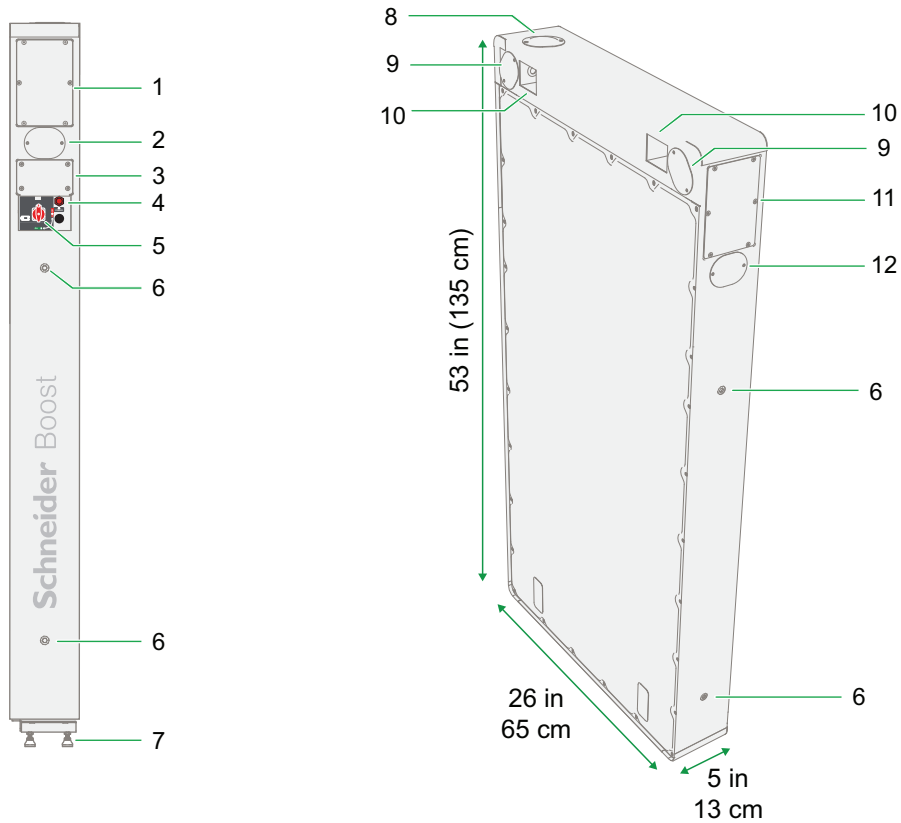
Front-to-Back Mounting Accessories

The following accessories are available for front-to-back multi-battery installations:

- **Front-to-Back Mounting Kit - 2 Batteries:** BA10KNA2S
- **Front-to-Back Mounting Kit - 3 Batteries:** BA10KNA3S

Physical Features

Figure 2 Physical features



1	Right-side wiring compartment (power connections)	7	Footrest
2	Right-side conduit hole for multi-battery installations (side-by-side)	8	Top conduit hole
3	Fuse compartment (Do not open without authorization from Schneider Electric)	9	Rear conduit hole (for front-to-back stacking)
4	Push button	10	Hole for wall mounting bracket
5	Disconnect switch	11	Left-side wiring compartment (communication connections)
6	Hole for handle / Tie Mount Bracket accessory (for front-to-back stacking)	12	Left-side conduit hole for multi-battery installations (side-by-side)

Cybersecurity Guidelines

This section includes information on how to help secure your system.

WARNING

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY

Use cybersecurity best practices to help prevent unauthorized access to the system software.

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

To find out about the latest cybersecurity news, sign up for security notifications, or to report a vulnerability, visit the [Schneider Electric Cybersecurity Support Portal](#).

NOTE: The list of recommended actions below is not a complete list of possible cybersecurity measures. It is meant to be a starting point to improve the security of your system.

Upgrades

- Always use the latest firmware for your Schneider Electric devices in order to get new features, cybersecurity fixes and improvements.

IMPORTANT: Always keep the system connected to the internet to allow updates.

- Keep your devices up to date (check for new firmware, or accept firmware update prompts)

Passwords

- Must include at least one upper case, lower case, and one number or special character
- Must have 8 characters minimum
- Must not contain your first name or last name, user name, or email address
- Should not be easily found in the dictionary, and a phrase is preferred.
- Should be changed frequently, at least once a year
- A default password must be changed immediately when first received and after a factory reset
- Never reuse passwords
- Never share passwords with unauthorized personnel

Network

- Schneider Electric devices should only be used in your personal home network
- Schneider Electric devices should not have a publicly accessible IP address
- Do NOT use port forwarding to access a Schneider Electric device from the public internet
- Schneider Electric devices should be on their own network segment. If your router supports a guest network or VLAN, it is preferable to locate the devices there
- Use the strongest Wi-Fi encryption available
- Use HTTPs in local network

Physical Site Security

To help prevent physical attacks:

- Install the system on private property, away from public passageways.
- Properly reinstall and close all covers.
- Route all cables through conduits.

Decommissioning

Before a device is permanently removed from your network, perform a full factory reset to erase all data

2 Storage

What's in This Chapter?

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Storing the Schneider Boost

Follow these guidelines if the battery will be stored on site before installation.

NOTICE

RISK OF EQUIPMENT DAMAGE

- Always store the battery in a dry location, where the ambient temperature is between 14°F to 104°F (-10°C to 40°C).
- The Schneider Boost must be installed and energized by the "Must Energize By" date on the packaging box label.
- After installation, the Schneider Boost can be shut down temporarily for a maximum of one month.
- To prepare the Schneider Boost for temporary shutdown, the DC Disconnect switch on each battery must be in the OFF position.

Failure to follow these instructions can result in equipment damage.

IMPORTANT: If the storage instructions above are not followed, the warranty may become void.


Temporary Shutdown

Note: The Schneider Boost can be shut down for a maximum of one month.


To temporarily shut down the battery:

1. Verify that the following requirements have been met:

Description	Requirement
Storage temperature range	14°F to 104°F (-10°C to +40°C)
Battery SoC range before shutting down the battery	45% and 55%

2. Press the battery's Power button for six seconds.
3. For each battery installed in the system, turn the battery's manual Disconnect switch to the  (open) position.

To use the battery after temporary shutdown:

1. For each battery in the system, turn the battery's manual Disconnect switch to the  (closed) position.
2. Press the Power button (short press).
3. Charge the battery to 100% before use.

3 Pre-Installation Planning

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Required Tools and Materials

The following materials and tools are not supplied but are required to complete the installation.

General

- Appropriate PPE (e.g. Safety Glasses, Gloves, Protective Footwear, etc.)
- Lock-out/Tag-out (LOTO) Kit
- Platform lift truck (min. 300 lb [136 kg] load capacity)
- (2) Straps (ratcheting or tie-down) to secure the battery to the hand truck
- Stud Finder
- Bubble/Spirit Level
- Power Drill and/or Impact Driver
- Drill Bit: 3/16 × 3 in.
- Impact Socket: 1/2 in. (metric size 13)
- Torque Screwdriver (20 in-lb to 50 in-lb capable)
- Screwdriver or Bit: Phillips #2
- Calibrated Professional Digital Multimeter (600 V, Cat III or higher)
- Cable conduits and fittings as per NEC requirements
- Wire stripper for #18 - #6 AWG stranded wire
- Torque Wrench, 10 to 25 ft-lb (120 to 300 in-lb)
- 3 in. extension for torque wrench
- Screwdriver or bit: Torx T15
- Small 90 degree #2 Phillips driver (e.g. Klein 65200 Mini Ratchet)

If longer cables are required:

- Battery power cables (600 V, 8 AWG, Red (+) & Black (-) pair)
- Crimping tool for Amphenol H4S (e.g. Amphenol UTXTC0004 or Rennsteig 624 1194 3 1 RT)
- (2) Amphenol H4 wrench wools (H4TW0001)
- Ground cable (600 V, 10 AWG)
- Insulated 5/16 in. stud ring terminal (yellow)
- Crimping tool for #10 AWG insulated crimps
- CAT 5e cable(s) (600 V, routed from Pulse Backup Controller to battery #1, and if needed, from battery #1 to battery #2, and from battery #2 to battery #3)
- RJ45 crimping tool

If mounting to a concrete or brick wall:

- (4) 5/16 x 2.5 in. concrete anchors
- (4) 5/16 x 1 in. steel fender washers
- Appropriate drill bit and impact socket

If front-to-back mounting multiple batteries:

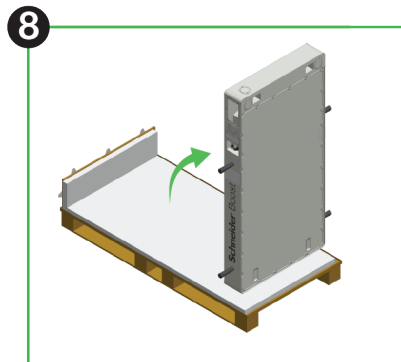
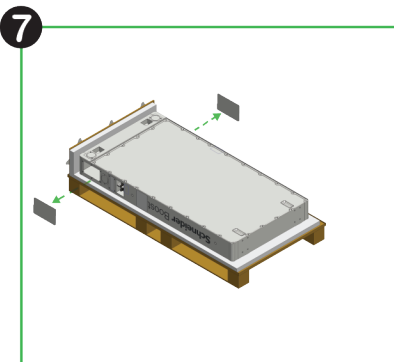
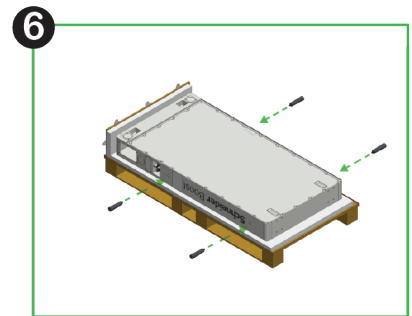
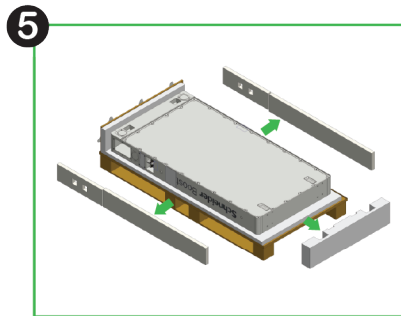
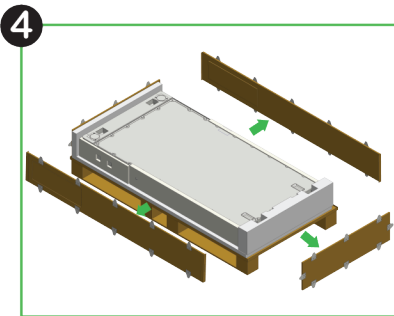
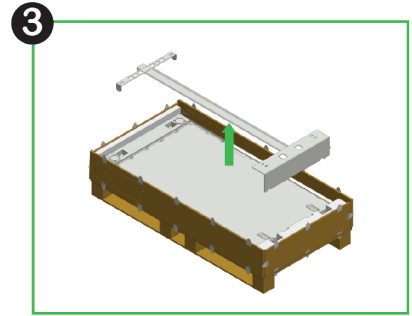
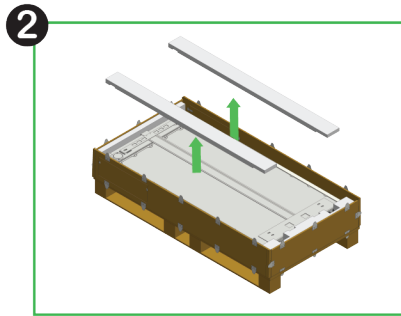
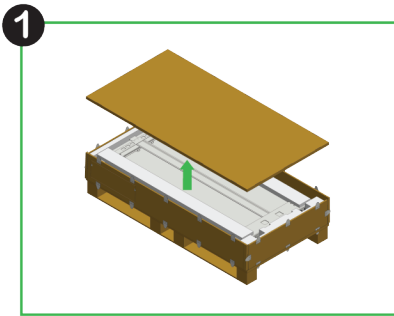
- Front-to-back Mounting Kit - 2 Batteries: BA10KNA2S
- Front-to-back Mounting Kit - 3 Batteries: BA10KNA3S
- Power Drill with 7/8 in. drill bit
- Knockout (KO) kit with 1.25 in. conduit size punch
- Galvanizing touch-up pen (must meet ASTM A 780 standards, e.g. Zinc-Pro™ P/N 07935)

Unboxing the Schneider Boost

Note: Before proceeding, position the lifting device close to the battery package.

To unbox the battery:

1. With the crate on level ground, use a crowbar to carefully open the metal clamps.
2. Remove the packaging material.
3. Lift out the wall mounting bracket.
4. Unclamp, and remove the sides of the box.
5. Remove the side packaging materials.
6. Screw in the four handles (provided).
7. Remove the covers over the left and right wiring compartments.
8. With a minimum of two people, use the handles to lift the battery to an upright position.



Lock-Out and Tag-Out (LOTO)

Before uninstalling or installing the Schneider Boost battery and Inverter, de-energize, lock-out and tag-out all power sources.

DANGER

HAZARD OF ELECTRIC SHOCK AND ARC FLASH

- This equipment must only be installed, uninstalled and serviced by qualified electrical personnel.
- Use appropriate personal protective equipment (PPE) and follow safe electrical work practices according to NFPA 70E or CSA Z462.
- Equipment energized from multiple sources including PV, AC, and additional batteries. Before removing covers identify all sources, de-energize, lock-out, and tag-out and wait five minutes for circuits to discharge.
- To turn the battery(ies) off: On all batteries, press the Power button for six seconds, and turn the disconnect switch to the OFF position.
- Verify de-energization with a voltage sensing device, rated 600 V or higher.
- Never energize the system or turn the battery disconnect switch(es) to the ON position with the wiring or fuse access covers removed.

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

Notes:

- For the battery disconnect switch(es), use a small lock or cable padlock as the lock-out device.
- For more information about the Schneider Inverter, see the *Schneider Inverter Installation Guide (TME12664)*.

Mounting the Schneider Boost

DANGER

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

This equipment is not ignition protected. To prevent fire or explosion, do not install this product in locations that require ignition-protected equipment. This includes any confined space containing lead acid batteries or flammable chemicals such as natural gas (NG), liquid petroleum gas (LPG), or gasoline (Benzine/Petrol).

- Keep sparks and flames away from the batteries.
- Do not install in a confined space with machinery powered by flammable chemicals.
- Do not store flammable liquids or gasses near the battery. When the battery is installed outdoors, keep flammable liquids or gasses at a distance of at least 50 ft (15 m) from the battery.
- Do not install the battery near readily flammable materials such as cloth, paper, straw, or plastic sheeting. Keep flammable materials a minimum distance of 12 in (30 cm) from the battery.
- Do not install the battery on a combustible surface.
- In case of fire, only ABC or dry chemical fire extinguishers can be used. DO NOT use liquid fire extinguishers. A fire extinguisher must be installed with the battery.
- Smoke detectors must be installed in the residence in accordance with building, fire and installation codes.

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

WARNING

RISK OF EXPLOSION, FIRE, PERSONAL INJURY, OR EQUIPMENT DAMAGE

Boost batteries have been evaluated per the UL9540A standard for residential use.

- The Schneider Boost must be installed only on exterior walls, or walls of indoor non-habitable spaces, which may include attached and detached garages, sheds, utility closets, and basements, and locations more than 152.4 cm (5 ft) from dwelling units, where permitted in the applicable installation codes.
- The Schneider Boost is not intended for installation in habitable spaces and livings spaces in dwelling units, including bathrooms, toilet rooms, closets, halls, and storage spaces.
- If you have multiple batteries, supported by more than one inverter, the maximum kWh of batteries that can be co-located in an area may not exceed local installation codes.

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

 **WARNING****RISK OF EXPLOSION, FIRE, PERSONAL INJURY, OR EQUIPMENT DAMAGE**

- The Schneider Boost weighs approximately 280 lbs (127 kg). A lifting device must be used to lift the Schneider Boost. In addition to a lift device, two people are required to position the battery.
- Always use straps to tie the Schneider Boost to the hand truck.
- Verify that the handle threads are not crossed during installation, and that the handles are tightened so that they will not turn or come loose during use.
- For structural and seismic stability, the Schneider Boost must be mounted onto a vertical supporting surface strong enough to support the Schneider Boost, with the Schneider Inverter and any other equipment that is installed on the same surface. For drywall surfaces, the mounting bracket must be secured to studs for both floor mount and wall mount installations, following the instructions in this guide. Do not attempt to anchor to drywall.
- The mounting hardware must be suitable for the weight of the product.
- Do not mount the Schneider Boost onto metal studs.
- For front-to-back multi-battery installations, batteries must be floor mounted.
- For floor mounting, only install the Schneider Boost on a flat, even, concrete surface that is free from any potential risks that may harm the battery (such as flooding or vehicular movement). The floor must be able to withstand a minimum weight of 300 lbs per square foot.
- Floor or pad mounted installations must also be secured to the wall (for single and stacked battery configurations), as defined in this manual.

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

NOTICE**RISK OF EQUIPMENT DAMAGE**

- Do not install in an area prone to flooding or other sources of water.
- The Schneider Boost's rated operating temperature range is 5°F to 122°F (-15°C to 50°C), and the recommended temperature range is 32 to 86°F (0 to 30°C). Installing the Schneider Boost in an environment that is frequently outside of the recommended temperature range may lead to a reduced life cycle.
- If installed outdoors, it is recommended to install the Schneider Boost under a shade.

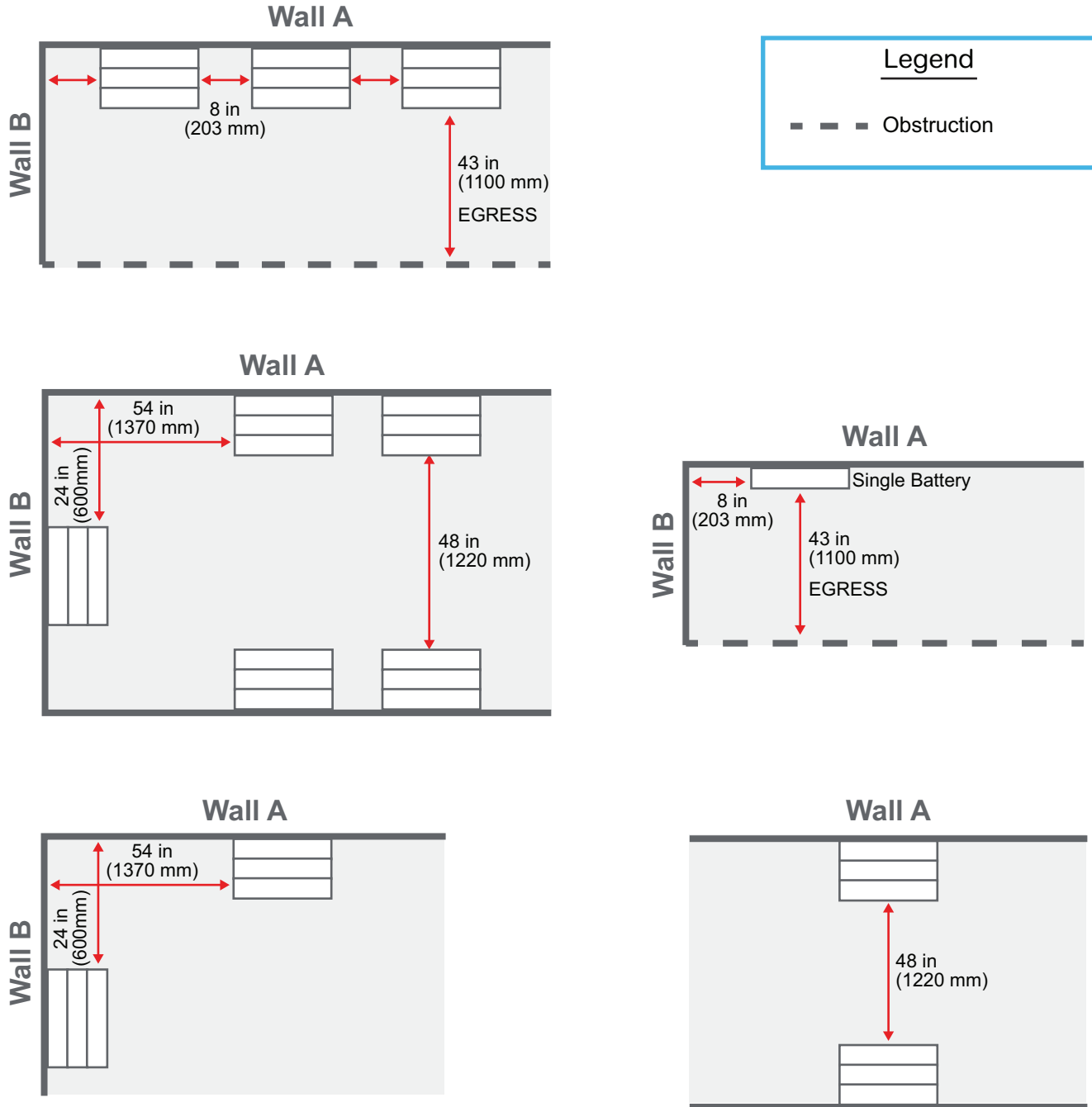
Failure to follow these instructions can result in equipment damage.

Choosing a Location

When choosing a location, follow the spacing requirements in the image below.

IMPORTANT: Maximum **3 batteries per system**. These images are for reference only, to indicate minimum spacing.

Figure 3 Battery clearances



Mounting Preparation

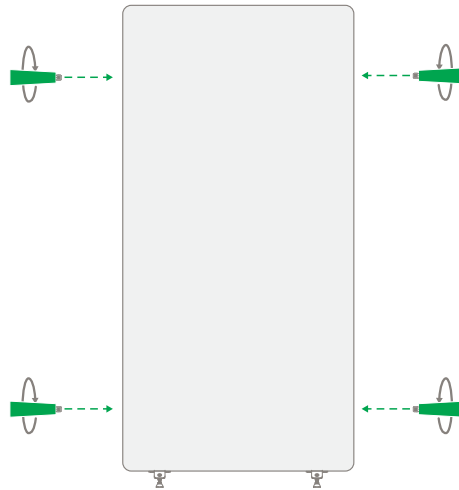
Note: To see the full list of accessories referenced below, see *What's in the box* on page 23.

Before mounting the Schneider Boost:

1. Install the four handles.

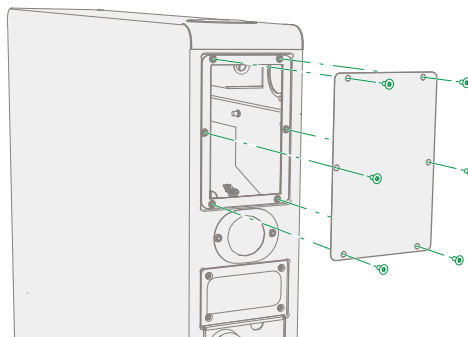
⚠ CAUTION
EQUIPMENT DAMAGE OR PERSONAL INJURY
<ul style="list-style-type: none"> ▪ Verify that the handle threads are not crossed during installation. ▪ Verify that the handles are tightened so that they will not turn or come loose during use.
Failure to follow these instructions can result in injury or equipment damage.

Figure 4 Installing handles



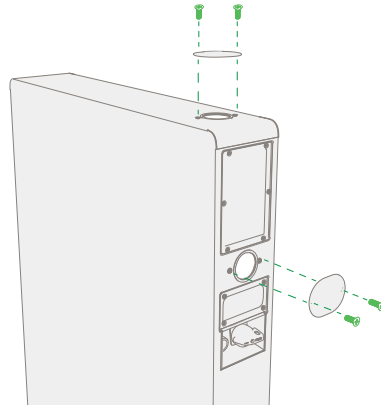
2. Remove the six Torx screws from the right and left-side wiring compartment covers of the Schneider Boost and then remove the covers. Save the screws for reinstallation.

Figure 5 Cover removal



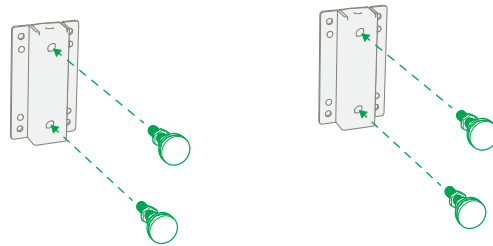
3. For the connections from the inverter to the battery, remove the conduit hole cover from the top of the battery.
4. For multi-battery installations in a side-by-side configuration, remove the conduit hole covers from the sides of the batteries, as needed (see Figure 4).
5. For multi-battery installations in a front-to-back configuration, remove the conduit hole covers from the back of batteries 2 and 3 (if installed).

Figure 6 Conduit hole cover removal

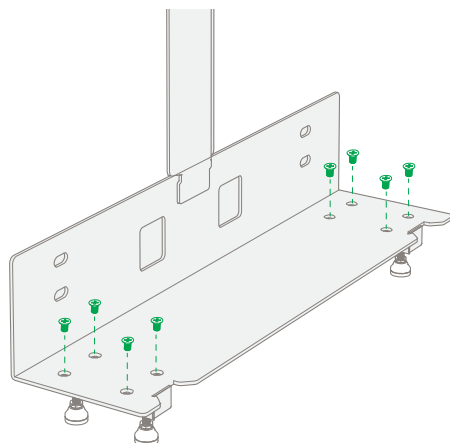


6. If wall mounting, go to Step 7. If floor mounting, install the four feet (**N**) into the two footrest mounting brackets (**O**).

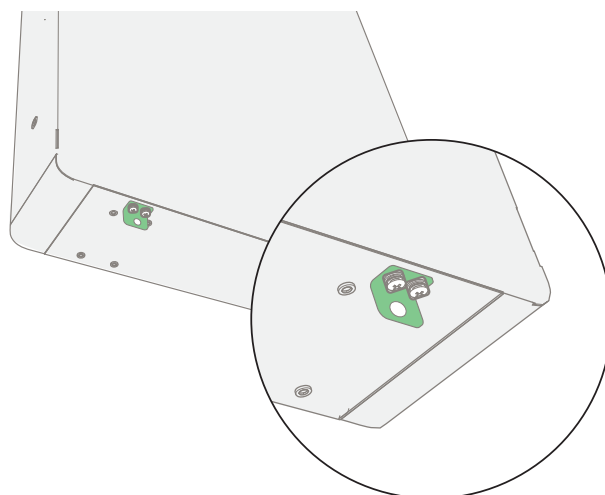
Figure 7 Feet installation



7. Install the two footrest mounting brackets (**O**) to the bottom of the wall mounting bracket (**B**) using the supplied M4 Torx screws (four per bracket).

Figure 8 Hat bracket installation

8. If the Schneider Boost will be floor mounted: Mount two footrest locator brackets (**M**) to the battery enclosure using the two supplied M4 SEMS screws per bracket (as shown below). Save the supplied M5 SEMS screws for attaching the locator bracket to the footrest bracket.

Figure 9 Locator bracket installation

Mounting Procedure

To mount the Schneider Boost:

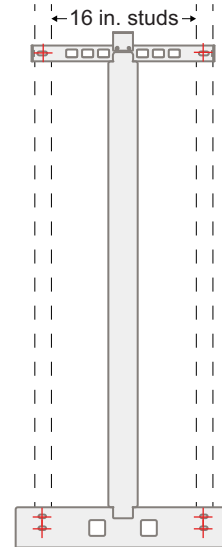
1. Mark and pre-drill an appropriate mounting surface to fit the mounting hardware.

Table 2 Mounting surfaces

Wood Studs

Wood studs: Use the six supplied wood screws (see **J** in Figure 1 on page 23). Drill a pilot hole that is 3/16 in. by 3 in. deep.

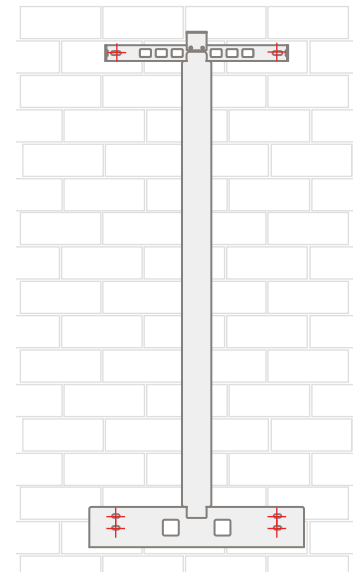
Important: Do not mount the Schneider Boost on metal studs.



Concrete or Brick

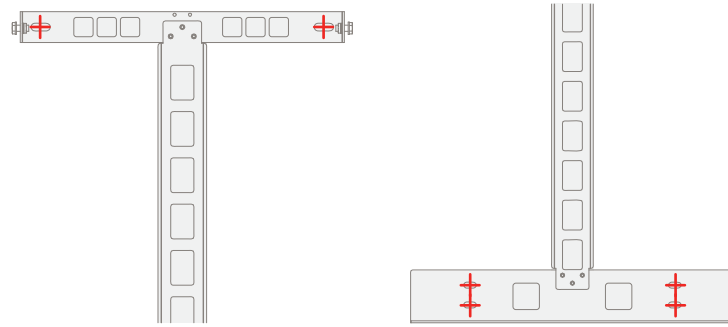
Minimum strength must be 2500 PSI (concrete) or 1500 PSI (brick/masonry).

Use six 5/16" anchor bolts with washers. The fastener must be long enough so that at least 2 in. (5.08 cm) can be embedded into the mounting material. All fasteners must be at least 1.5 in (38 mm) away from the edges of masonry blocks or bricks.



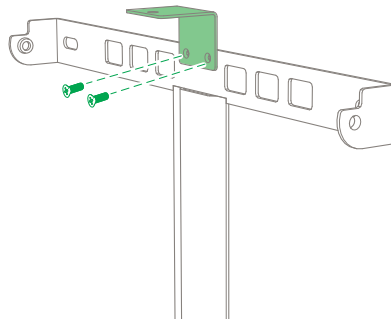
2. Install the wall mounting bracket (**B**) onto the mounting surface (see "Mounting surfaces" on page 1 for details).

Figure 10 Mounting bracket installation



3. If installing the Schneider Inverter above the battery, install the inverter alignment bracket (I), as shown below.

Figure 11 inverter alignment bracket installation



4. With at least two people, tilt the Schneider Boost up onto the hand truck. Use straps to tie the Schneider Boost to the hand truck.

⚠ CAUTION

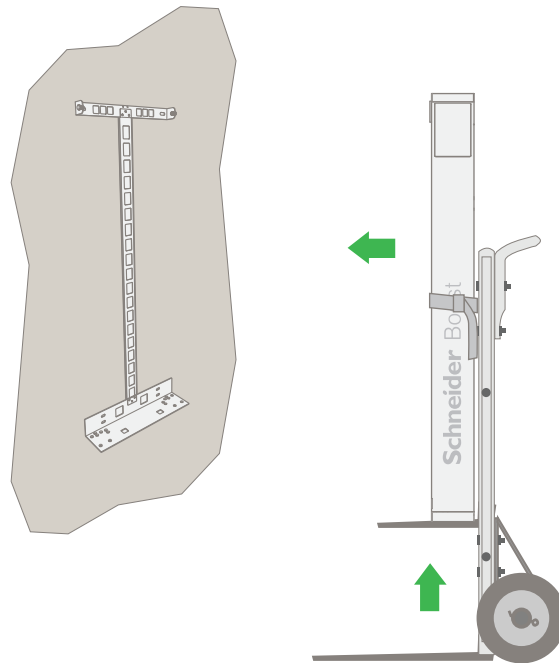
EQUIPMENT DAMAGE OR PERSONAL INJURY

- The Schneider Boost weighs approximately 280 lbs (127 kg). A lifting device must be used to lift the Schneider Boost. In addition to a lift device, two people are required to position the battery.
- Always use straps to tie the Schneider Boost to the hand truck.

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

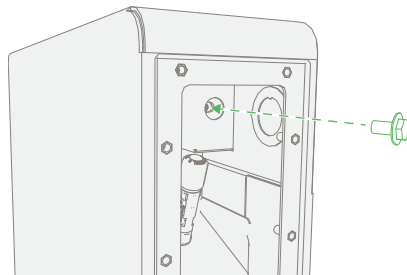
5. Using the hand truck, lift the Schneider Boost up to the mounting bracket.

Figure 12 Lifting the Schneider Boost



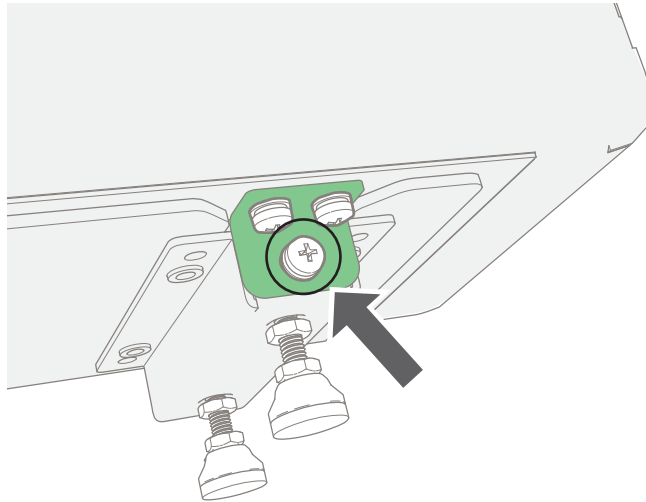
6. With at least two people, use the lift handles to align the battery with the mounting bracket:
 - a. **Bottom:** Place the battery over the bottom of the wall mounting bracket.
 - b. **Top:** Align the two fastening holes in the wiring section of the Schneider Boost with the weld nuts in the top mounting bracket (see Figure 13).
7. Fasten the top of the battery to the wall mounting bracket using two M8 x 16 mm hex head flanged bolts (**H**). Torque to 19 lb-ft (26 Nm).

Figure 13 Battery mounting, top



8. Reinstall the left and right covers (see Figure 4 on page 39).
9. Remove the handles.
10. If floor mounting:
 - a. Install the supplied M5 SEMS screw to attach the two footrest locator brackets (**M**) to the footrest mounting brackets (**O**).

Figure 14 Footrest locator bracket installation (floor-mounting)



- b. Unscrew the four feet to lower them to the ground. Verify that the feet are installed on level ground, and that all feet have firm, even contact with the ground.
11. For multi-battery mounting steps, see Mounting a Dual or Triple Battery System on page 59.

4 Wiring

What's in This Chapter?

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Power Cable Connections	50
Communication and Rapid Shutdown (RSD) Connections	53
Ground Connections	57
Installing a Dual or Triple Battery System	59
Mounting a Dual or Triple Battery System	59
Wiring a Dual or Triple Battery System	64
Adding More Batteries to the System	66
Commissioning	67

Wiring

DANGER

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

- This equipment must only be installed, uninstalled and serviced by qualified electrical personnel.
- Use appropriate personal protective equipment (PPE) and follow safe electrical work practices according to NFPA 70E or CSA Z462
- The Schneider Boost is energized from multiple sources of energy, including PV, and AC. Before removing covers, identify, de-energize, lock-out and tag-out all power sources. Wait five minutes for circuits to discharge.
- Verify de-energization with a voltage sensing device, rated 600 V or higher.
- Never energize the system or turn the battery disconnect switch(es) to the ON position with the wiring or fuse access covers removed.
- Do not connect the battery to AC power directly.

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

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR EQUIPMENT DAMAGE

- The battery must only be used with a compatible Schneider Inverter (**HY8K1NA1**).
- Before energizing, make sure that all Schneider Boost batteries in the system are installed and that the conductors are properly terminated.
- Power and communication cables must use waterproof conduit and conduit fittings per NEC guidelines.

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

NOTICE

RISK OF EQUIPMENT DAMAGE

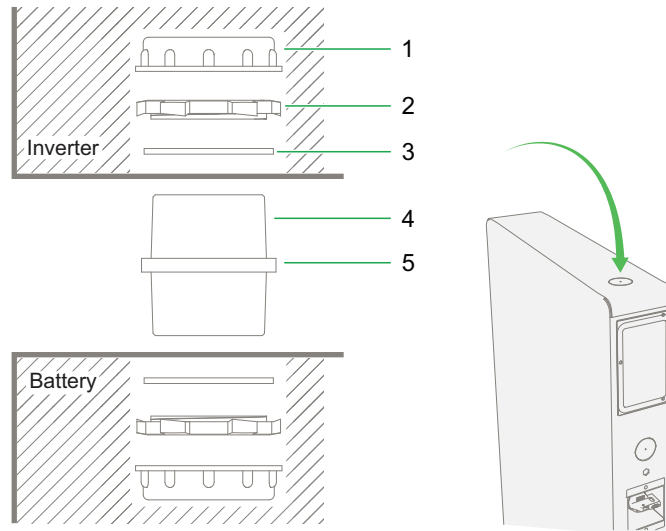
- A maximum of three Schneider Boost batteries can be installed per inverter.
- Do not install the Schneider Boost with other types of batteries.

Failure to follow these instructions can result in equipment damage.

Installing the Conduit Assembly

Install the supplied conduit assembly between the Schneider Inverter and Schneider Boost.

Figure 15 Conduit assembly installation



1	Bushing	4	Conduit
2	Lock nut	5	Spacer
3	O-ring		

To install the provided conduit assembly:

1. Place the conduit assembly through the designated conduit hole in the inverter's wiring compartment (see the *Schneider Inverter Installation Guide (TME12664)*).
2. Place the spacer onto the conduit.
3. Pass the conduit through the battery's top conduit hole.
4. Holding the conduit in place, thread the following onto the top of the conduit, in this order (as shown above): O-ring, lock nut, bushing.
5. Thread the following onto the bottom of the conduit, in this order: O-ring, lock nut, bushing.

Power Cable Connections

NOTICE

RISK OF EQUIPMENT DAMAGE

- Before making the final DC connection or closing the battery disconnect, check cable polarity at both the battery and the inverter. The positive (+) terminal in the Schneider Boost must be connected to inverter's positive (+) battery terminal. The negative (-) terminal in the Schneider Boost must be connected to the inverter's negative (-) battery terminal.
- Always check for proper crimping and tightening when assembling the battery's power cables and connectors.

Failure to follow these instructions can result in equipment damage.

NOTICE

RISK OF EQUIPMENT DAMAGE

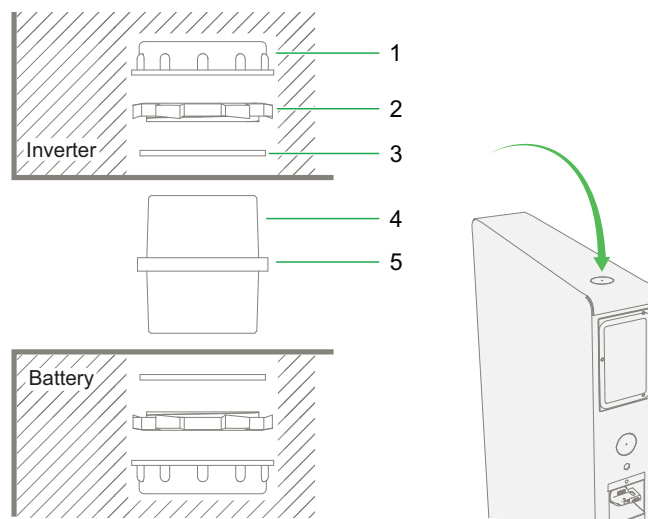
Use only the supplied Amphenol® HC4 connectors for Schneider Boost power connections.

Failure to follow these instructions can result in equipment damage.

Note: If the terminals are longer than 3 m apart (but within the required 50 ft. distance), follow the steps on the next page for installing the supplied Amphenol H4 Plus™ connectors and pins to #8 AWG power cables.

Connect the supplied positive (red) and negative (black) pre-crimped power cables from the Schneider Inverter's **Battery** terminals to the Amphenol H4 Plus connectors in the right side of the Schneider Boost.

Figure 16 Conduit assembly installation



Legend			
1	Bushing	4	Conduit
2	Lock nut	5	Spacer
3	O-ring		

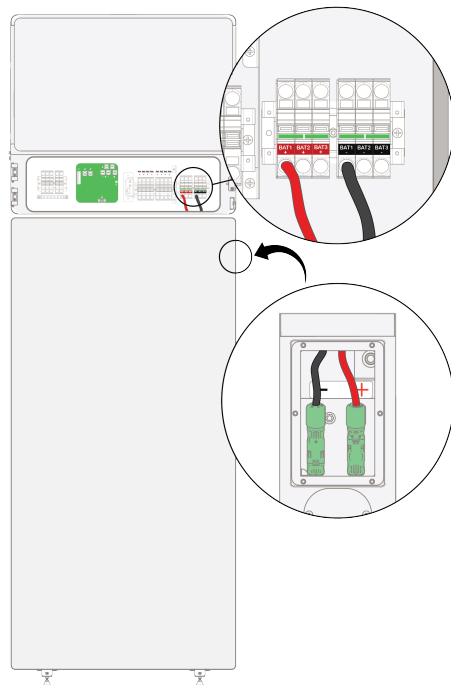


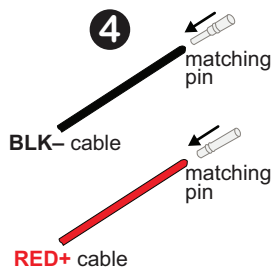
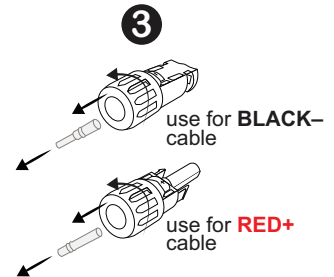
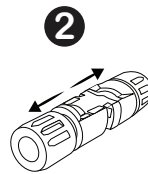
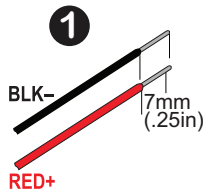
Table 3 Power connectors and tools

Type	Name
Connectors	Amphenol Amphe-PV H4 Plus™ rated ≥ 600 V, 8 AWG
Crimping tool	Amphenol H4S UTXTC0004
Wrench tool	Amphenol H4TW0001

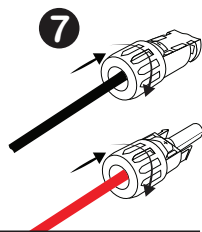
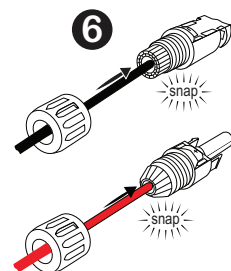
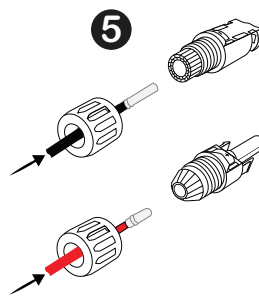
Procedure

To install the cables:

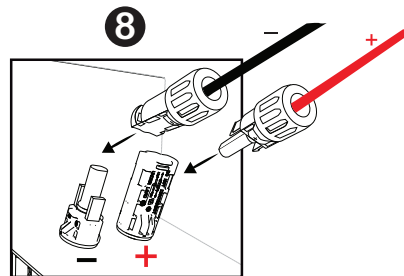
1. Strip the black (-) and red (+) cables.
2. Separate the connectors.
3. Remove the cable glands and matching pins.
4. Crimp the pins to the correct cables.
5. Thread the cables through the cable glands.
6. Insert each pin into the insulator until it snaps into place.
7. Screw the cable glands onto the connectors.
8. Verify that all batteries and inverters are off (see Lock-Out and Tag-Out (LOTO) on page 35), and the attach (-) connectors to (-) terminals and (+) connectors to (+) terminals.



Crimping tool **UTXTC0004**



Wrench tool **H4TW0001**



Communication and Rapid Shutdown (RSD) Connections

The Schneider Boost contains an internal battery management system (BMS). When connected to a Schneider Inverter, the Schneider Boost can report status information to Installer Portal, and be powered off from the system's external Rapid Shutdown (RSD) switch.

There are three RJ45 ports in the Schneider Boost for connecting to a Schneider Inverter and other Schneider Boost batteries (if installed).

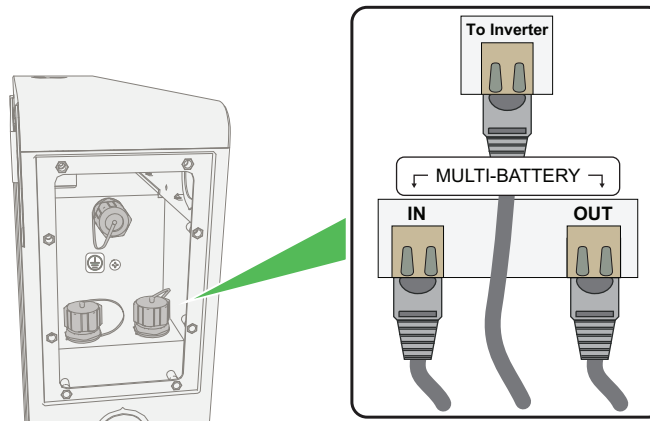
Required Communication Cable and Connector

The following communication cable and connector (or equivalent) are required. Only one cable is required for single-battery installs. More are required for multi-battery installs (see Wiring a Dual or Triple Battery System on page 64).

Table 4 Required communication cable and connector

Type	Required specifications	Example
Communication cable	<ul style="list-style-type: none"> ▪ The cable's wiring must be straight-through, not crossover. ▪ 600 V ▪ Shielded Cat 5e ▪ Multi-conductor, 4-twisted pair cable ▪ RJ45 connector with insulation diameter range of 3/64 to 1/32 in. (1.07 to 1.12 mm) ▪ Cable jacket diameter must be \leq 1/4 in. (6.8 mm) ▪ Conductor insulation diameter must be \leq 1/32 in. (1.12 mm) 	<p>BELDEN 7958A DataTuff® (or equivalent)</p> <p>For more information, see https://www.belden.com/</p>
<p>Note: For assembly information, follow instructions from the manufacturer.</p>		

Figure 17 RJ45 ports



Prepare the Cable and RJ45 Connector

Note: This procedure is for an RJ45 connector with a load bar. Connectors without a load bar may also be used.

To prepare the communication cable and connector:

1. Strip the cable jacket 1.5 in., remove the spline, and untwist the wires.

Figure 18 Strip and untwist

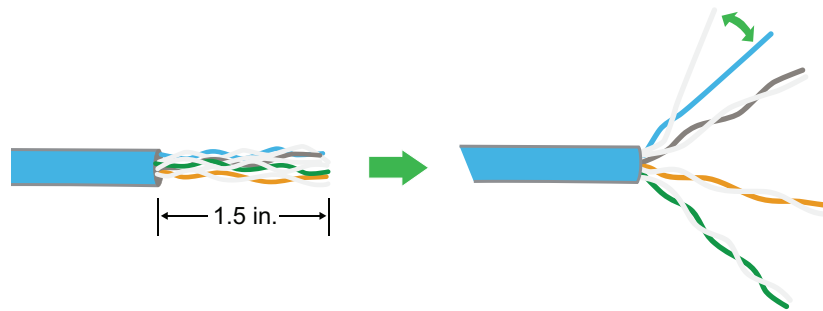
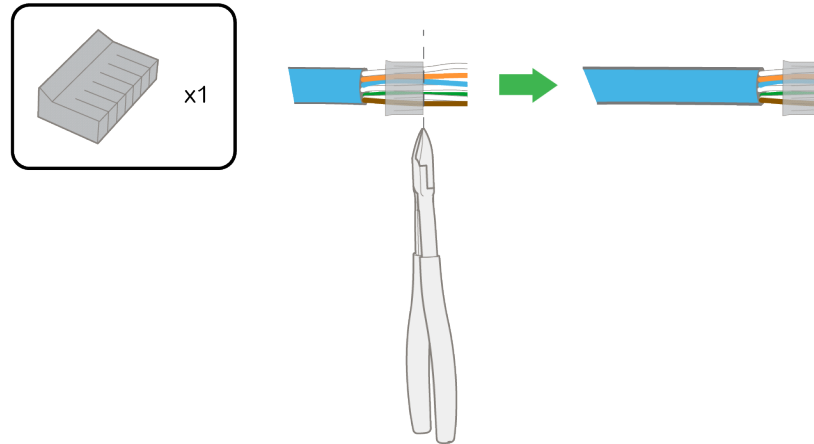


Table 5 BMS pin-out

Pin Number	Signal	Description
1	CAN_H	CAN-High
2	CAN_L	CAN-Low
3	GND	Ground
4	RSD+	Rapid Shutdown, positive
5	RSD+	Rapid Shutdown, positive
6	RSD-	Rapid Shutdown, negative
7	GND	Ground
8	RSD-	Rapid Shutdown, negative

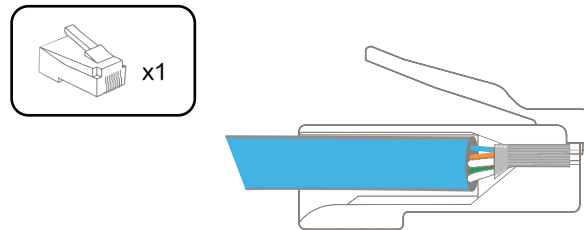
2. Slide the load bar over the wires (with the narrow side facing away from the cable jacket), until the load bar is no more than 1/4 in. from the cable jacket.
3. Cut the wires flush in front of the load bar.

Figure 19 Load bar



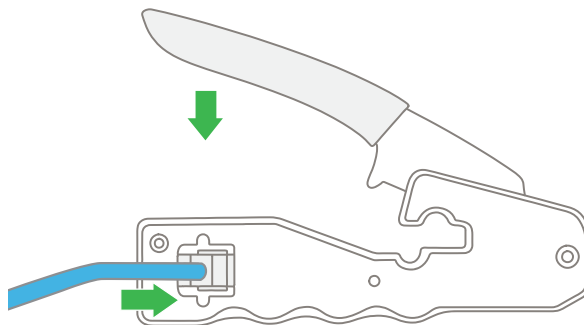
4. Insert the load bar into the RJ45 plug housing until the load bar reaches the front of the housing.

Figure 20 RJ45 connector



5. Place the RJ45 connector with load bar assembly into an RJ45 crimping tool and fully close the handle to crimp the RJ45 connector onto the cable.

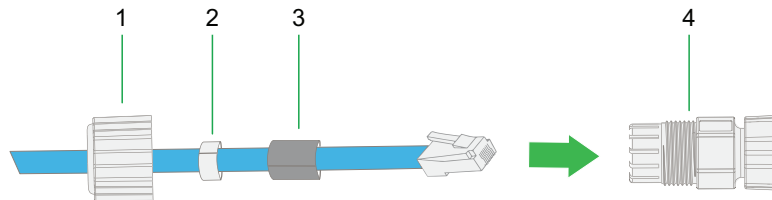
Figure 21 RJ45 crimping



6. Verify that the load bar is fully seated, all golden contacts are seated, and the strain latch is engaged over the cable.
7. Install the supplied waterproof connectors (**G**) over the RJ45 connector (see Install the Waterproof Connector on page 56).

Install the Waterproof Connector

Figure 22 Waterproof RJ45 connector installation




1	Threaded lock nut
2	Grey silicone ring
3	Black silicone ring
4	Connector plug housing

To install the supplied waterproof connector:

1. Slide the threaded lock nut onto the RJ45 cable.
2. Open the grey silicone ring and place it over the RJ45 cable.
3. Open the black silicone ring and place it over the RJ45 cable.
4. Slide the RJ45 connector and cable through the connector plug housing.
5. Push the black and grey silicone rings up into the plug housing.
6. Screw the threaded lock nut onto the plug housing.

Connect the Cable from the Battery to the Inverter

To make communication connections:

1. Remove the cover over the battery's "**To Inverter**" port and then connect a 600 V CAT5e cable from the Schneider Inverter's  port to the battery's "**To Inverter**" port.
2. If multiple batteries are being installed:
 - For dual battery systems, install a CAT5e cable from Battery 1 to Battery 2.
 - For triple battery systems, daisy-chain a CAT5e cable from Battery 1 to Battery 2 and from Battery 2 to Battery 3.

Ground Connections

⚠️ ⚠️ WARNING

HAZARD OF ELECTRIC SHOCK

Equipment ground terminals must be reliably connected to ground by appropriately sized grounding conductors, as described in this document. Comply with national and local codes for specific grounding and bonding requirements.

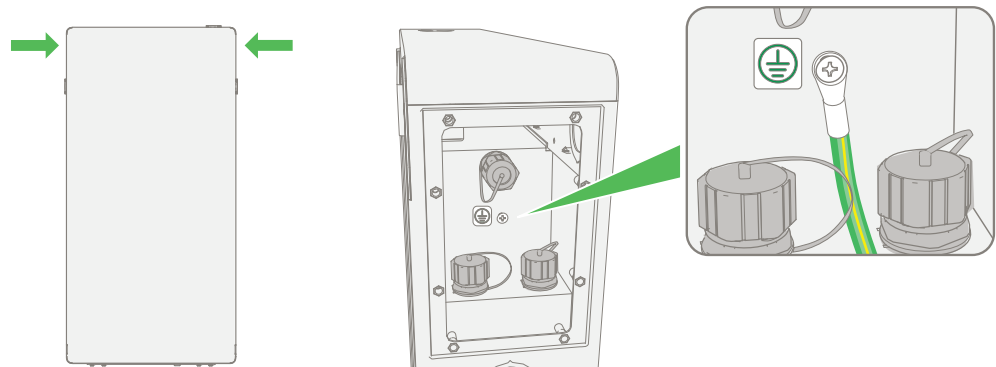
Failure to follow these instructions can result in death, serious injury, or equipment damage.

Two rivet nuts are provided: one in the left, and one in the right wiring section of the Schneider Boost.

Table 6 Ground cable specifications

Cable type	Size	Rating	Connection type	Torque
Ground	10 AWG	600 V	M6 screw with flat washer and ring terminal	44.3 in-lb (5 Nm)

Figure 23 Ground connection, single battery



Grounding Single Battery Installations

1. Connect a #10 AWG ground cable to the Schneider Inverter's ground bar terminals.
2. Crimp the supplied ring terminal (F) to the other end of the ground cable, and connect it to one of the rivet nuts in the Schneider Boost (in the right or left-side wiring section).

Grounding Multi-Battery Installations

1. Connect one ground cable from the Schneider Inverter to the Schneider Boost that is installed below the inverter (**Battery 1**). Use either the right or left-side wiring section of **Battery 1**, leaving the other ground terminal for the ground connection to **Battery 2**.
2. Connect ground cables to the other batteries using one of the following methods:
 - Connect the ground cables in a daisy chain between batteries (see Figure 24).
 - Connect the ground cables from each battery to the inverter ground terminals (see Figure 25).

Figure 24 Ground connections, daisy chain

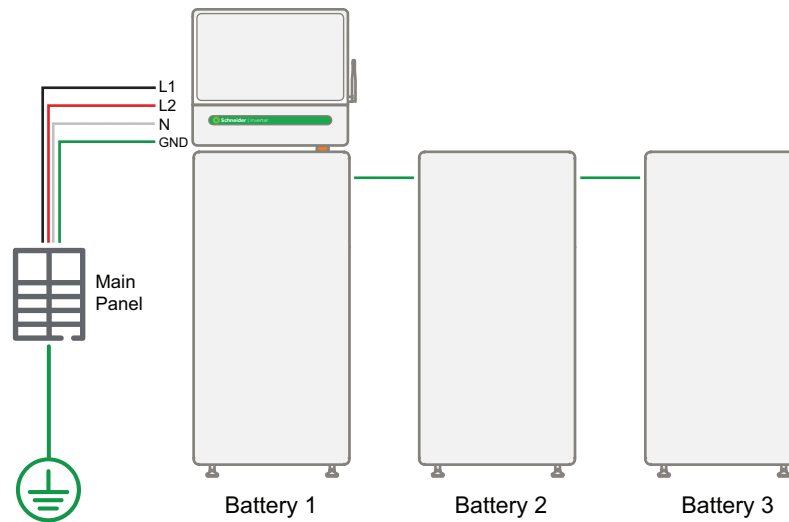
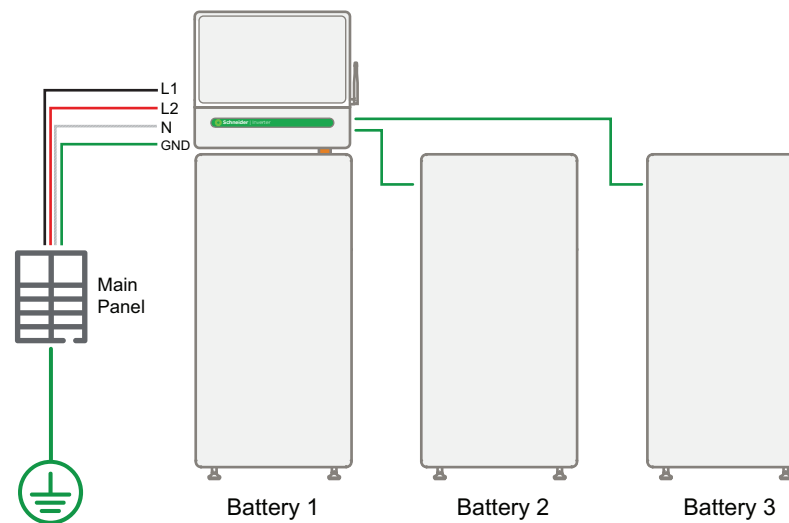


Figure 25 Ground connections, multi-battery



Note: Daisy chain ground connections between each battery are also possible.

Installing a Dual or Triple Battery System

This section provides instructions for adding a second and third Schneider Boost to your installation. Complete the following installation steps only after you have installed the first Schneider Boost.

WARNING

HAZARD OF EXPLOSION AND FIRE

- A maximum of three batteries can be installed per inverter.
- If you have multiple batteries supported by more than one inverter, the maximum kWh of batteries that can be co-located in an area may not exceed local installation codes.
- Do not install the Schneider Boost with other types of batteries.

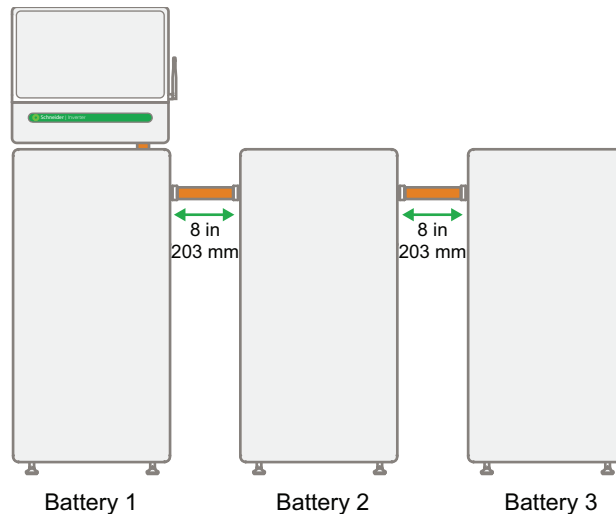
Failure to follow these instructions can result in death, serious injury, or equipment damage.

Mounting a Dual or Triple Battery System

The Schneider Boost can be floor mounted or wall-hanging. To install multiple batteries front-to-back, you will need one of the accessory kits described in "Front-to-Back Mounting" on the next page.

Side-By-Side Mounting

Side-by-Side Mounting






To install the batteries side-by-side:

1. If a Schneider Inverter is installed, install the first battery below the Schneider Inverter, following the steps in Mounting a Dual or Triple Battery System on page 59.

2. Install the second (and third) batteries ≥ 8 in. (203 mm) apart (as shown above), following the steps in Mounting a Dual or Triple Battery System on page 59.

Front-to-Back Mounting

  WARNING
HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH
For front-to-back mounting:
<ul style="list-style-type: none"> ▪ Keep metal filings from coming into contact with any terminals. Before punching conduit holes in the Schneider Boost for front-to-back mounting, make sure that the caps are installed on all communication and power ports in the Schneider Boost. ▪ To reduce the amount of metal filings, use a 1 1/4 in. knockout hole punch tool to cut the conduit hole. ▪ Clean all metal filings out of the Schneider Boost before turning the battery system on. ▪ Cut hole edges must be sealed to help protect against corrosion formation, using a Schneider Electric-approved Zinc-rich paint marker (Zinc-Pro™ Galvanizing Touch-Up Marker (ASTM-A780-01), or equivalent).
Failure to follow these instructions can result in death, serious injury, or equipment damage.

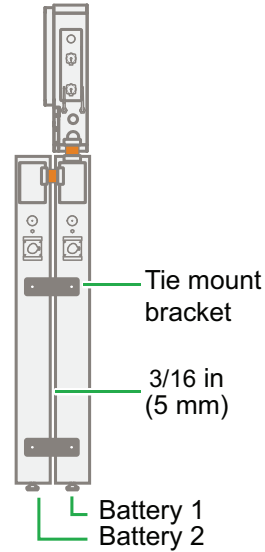
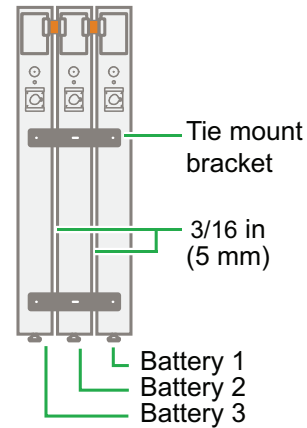
 CAUTION
HAZARD OF PERSONAL INJURY OR EQUIPMENT DAMAGE
For front-to-back multi-battery installations, the stacked batteries must be floor mounted.
Failure to follow these instructions can result in injury or equipment damage.

- **Front-to-Back Mounting Kit - 2 Batteries:** BA10KNA2S
- **Front-to-Back Mounting Kit - 3 Batteries:** BA10KNA3S

Table 7 Mounting kit accessories

Front-to-Back Mounting Kit Contents	Quantity for 2 batteries	Quantity for 3 batteries
Drilling template, front conduit hole	1	1
Conduit Assembly	1	2
Tie-mount bracket	4	4
Hex head concrete anchor bolt	4	8
Phillips screw, M5	8	16
Flanged bolt, M8	6	8
Flanged nut, M8	2	4

When installed with a Schneider Inverter above, two batteries can be stacked back-to-back below the inverter. If not installed below an inverter, a maximum of three batteries can be installed back-to-back.

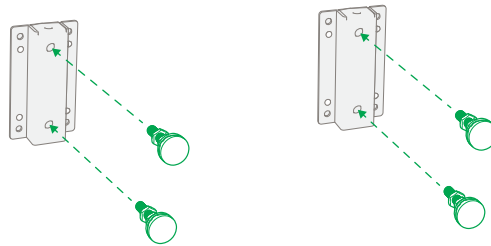
With Schneider Inverter above**Without Schneider Inverter above****To install the batteries front-to-back:**

- Using the paper conduit hole drilling template provided in the Front-to-Back Mounting Kits, mark the center of the conduit hole locations on the Schneider Boost.

Note: To help brace the batteries, two conduit assemblies must be installed between the batteries. Only the right conduit is used for cable connections between batteries.

- Using the markings from step 1, drill a pilot hole for each conduit hole location.
- Using a knockout hole punch tool, cut two 1 ¼ in. knockout conduit holes in the front of **Battery 1**.
- For **Battery 2**:
 - Remove the two plugs from the back of **Battery 2**.
 - If a third battery will be installed, cut two 1 ¼ in. conduit holes in the front of **Battery 2**.
 - Install the feet and footrest mounting brackets.

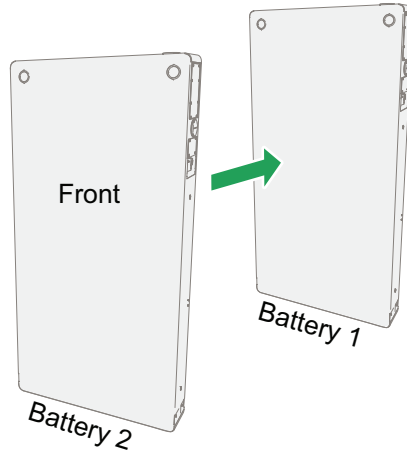
Figure 26 Feet installation



- If a third battery is installed, remove the two plugs from the back of **Battery 3**.

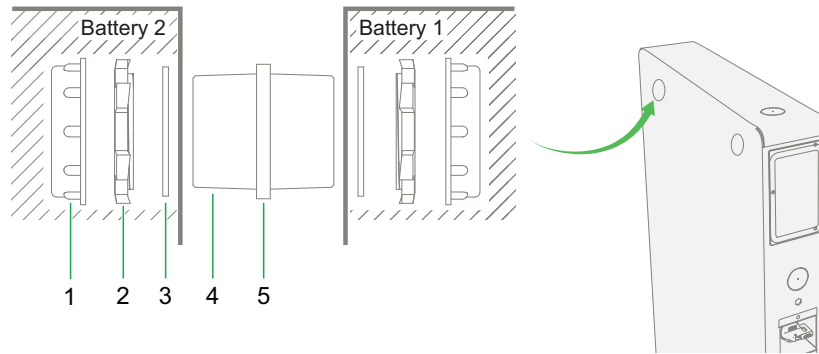
6. Use a vacuum to remove all metal shavings from inside the left and right wiring sections.
7. Seal all cut hole edges using a Schneider Electric-approved paint to seal the cut edges (Zinc-Pro™ Galvanizing Touch-Up Marker (ASTM-A780-01), or equivalent).
8. Install **Battery 2** in front of **Battery 1**, as shown below.

Figure 27 Front-to-back mounting



9. Install the conduit assemblies between the batteries, with the O-rings on the inside of each battery enclosure (see below).

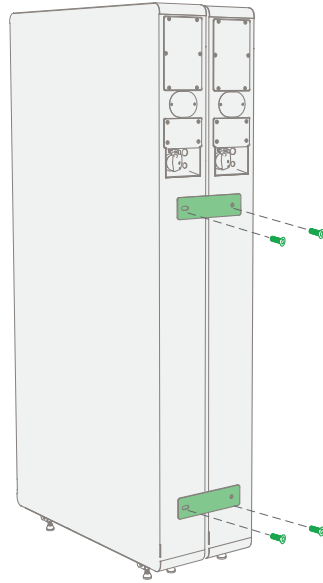
Figure 28 Conduit installation



1	Bushing	4	Conduit
2	Lock nut	5	Spacer
3	O-ring		

10. If there is no inverter installed above the batteries, repeat steps 7-9 for **Battery 3**.
11. Install the four tie mount brackets to the left and right sides of the batteries using M8 x 16 flanged bolts. Torque to 15.5 ft-lb (21 Nm).

Figure 29 Tie-mount bracket installation (2 batteries)



Wiring a Dual or Triple Battery System

For grounding information, see Ground Connections on page 57.

1. Complete the steps in Wiring on page 48 for each Schneider Boost, taking care to connect **Battery 2**'s cables to the Schneider Inverter's positive and negative Battery terminals labeled "2", and to connect **Battery 3**'s cables (if needed) to the Schneider Inverter's positive and negative Battery terminals labeled "3," as shown below in Figure 30.

NOTICE
<p>RISK OF EQUIPMENT DAMAGE</p> <ul style="list-style-type: none"> ▪ A maximum of three Schneider Boost batteries can be installed per inverter. ▪ Do not install the Schneider Boost with other types of batteries. <p>Failure to follow these instructions can result in equipment damage.</p>

Figure 30 Multi-battery power connections

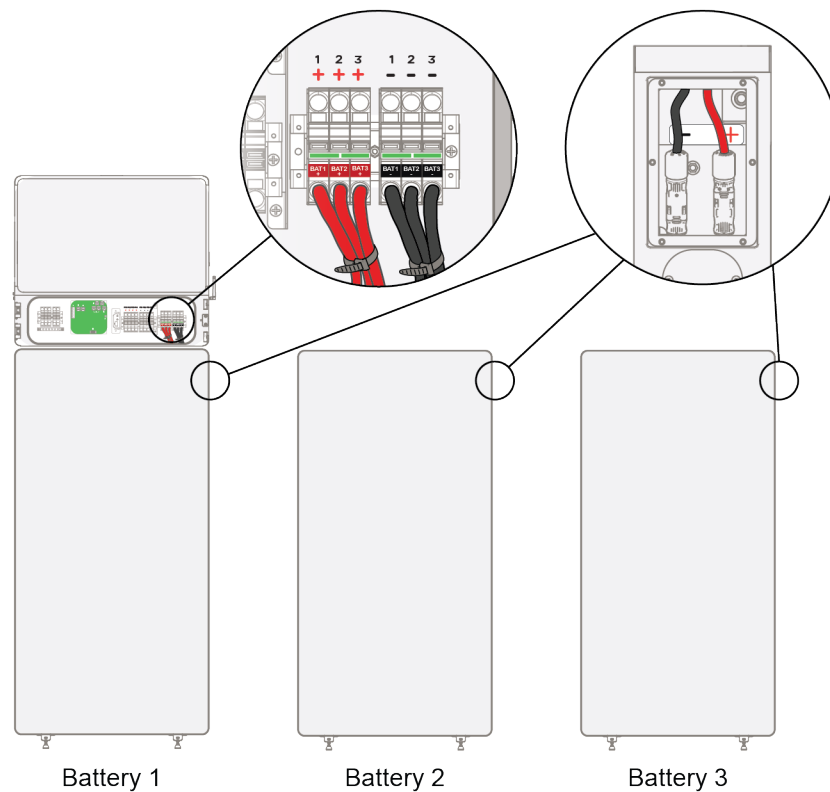
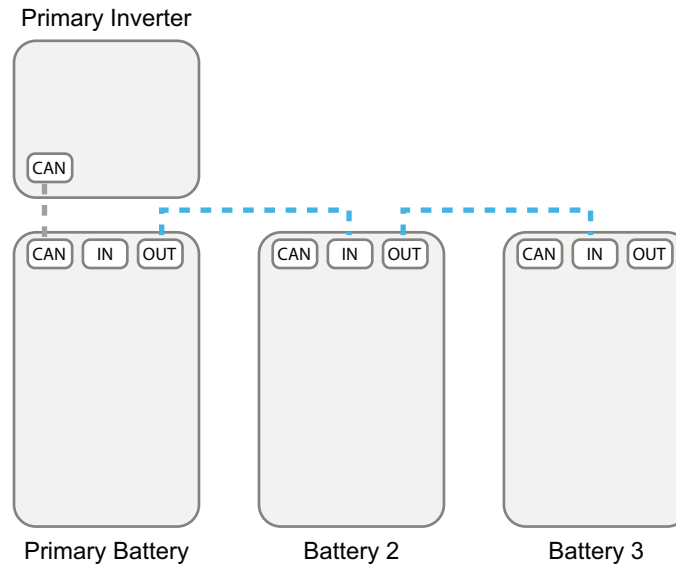


Figure 31 Multi-battery communication connections






Note: In a dual battery system, install a CAT5e cable from Battery 1 to Battery 2. In a triple battery system, daisy-chain a CAT5e cable from Battery 1 to Battery 2 and from Battery 2 to Battery 3 (as shown below).

2. Complete the steps in "Ground Connections" on page 57 for each Schneider Boost.
3. Complete the "Commissioning" on page 67 for each Schneider Boost.
4. Use eSetup and Installer Portal to configure programmable settings and name specific network components, as needed. **Note:** When installing more than one Schneider Boost together, use Installer Portal to give a unique Device Name and Number to each Schneider Boost. This will help ensure primary/secondary relationships and other relevant configurations to match the planned setup.

Adding More Batteries to the System

This procedure is for adding more batteries to the system, after the initial installation.

To add Schneider Boost batteries to the system:

1. Verify that the "Energize by" date on the new battery's package has not passed.
2. Complete the steps in Lock-Out and Tag-Out (LOTO) on page 35.
3. On the new battery(ies), turn the disconnect switch(es) to the open  position.
4. Mount the new battery, following the instructions in Installing a Dual or Triple Battery System on page 59.
5. Connect cables to the new battery, following the instructions in Wiring a Dual or Triple Battery System on page 64.
6. Turn the external AC (grid) disconnect to the **ON** position.
7. On the connected Schneider inverter(s), turn the Solar disconnect switch to the closed  position.
8. Turn the Schneider Boost's battery disconnect switch to the closed position . Repeat for all batteries (see).
9. Press the battery's Power button (short press). Repeat for all batteries within 30 seconds.

Note: After installing the new battery(ies) and turning on the system, the battery with the lowest State of Charge (SoC) will connect first. Other batteries will connect to the system when the State of Charge is synchronized during the charge cycle.

Commissioning

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

Thoroughly inspect the battery prior to energizing. Verify that no tools or materials have inadvertently been left inside the battery, and that all covers are properly closed and secured.

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



Before powering on the inverter, perform the following inspections:

Physical Inspections

- The Schneider Boost is stable and fixed to an appropriate surface.
- The Schneider Boost is free of debris, and there are no objects such as tools or extra screws inside or on top of the Schneider Boost.
- The cables are routed through cable glands or conduits and protected against potential mechanical damage. Conduits are sealed properly to avoid water or other ingress.
- Verify that wires are firmly connected by performing a push-pull test.
- The battery cable polarity at both the battery and the inverter is correct.

Prepare network and phone for commissioning

- Check that you have an iPhone® or Android phone with the latest operating system and a charged phone battery at the commissioning site.
- Check that you have eSetup installed on your phone. Use the QR code below to download the app.
- If connectivity will be limited at the site and you are viewing this document online, download or print a copy that you can access offline.
- Use eSetup to configure the inverter and battery, and verify operation.

Note: Complete the [Schneider Home Certification training](#) before signing into the eSetup app. To log in to the app, use the same email ID and password as your training. Do not sign up with a new ID.

For more information or to download **eSetup™** click below or go to:

<https://www.se.com/ww/en/work/solutions/software/applications/esetup-for-electricians.jsp>



5 Operation

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Using the Battery's Power Button and Disconnect Switch	70
Black Start	71
Turning the Battery On	71
Turning the Battery Off	73

Using the Battery's Power Button and Disconnect Switch

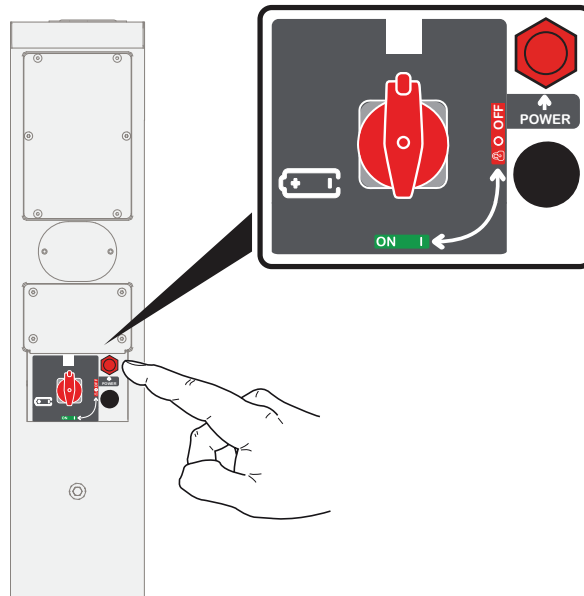
To use the battery's power button:

1. Press the power button on the battery (see table below).

Table 8 Power button operation

Press time	Description
Short press (0.5 seconds)	Turns the battery On (see Turning the Battery On on page 71)
Long press (≥ 6 seconds)	Turns the battery Off (see Turning the Battery Off on page 73)
3 seconds	Black Start (see How to Use Black Start on page 71)

Figure 32 Battery Power button and Disconnect switch



2. To verify the operation status, do one of the following:
 - If the system has been commissioned (using eSetup) and there is Internet connectivity, use the Installer Portal or the Schneider Home app to verify the state of the battery and inverter.
 - If the system has not been commissioned yet, monitor the inverter's LED for the status of the system.

Black Start

In most cases, the battery will automatically self-recover when there is an available energy source. However, the black start procedure may be required after an extended period without a charging source.



When to Use Black Start

Black start can be used:

- To start commissioning the system. **Note:** Grid power is required to complete commissioning.
- For system recovery, if a charging source is present and the system has not automatically resumed operation.

How to Use Black Start

To use Black Start:

1. On all connected batteries:
 - a. Turn the disconnect switch to the OFF  position.
 - b. Wait 10 seconds.
 - c. Turn the disconnect switch to the ON  position.
 - d. Wait 10 seconds.
2. On all connected batteries, press the Power button for 0.5 seconds (press all Power buttons within 30 seconds).
3. Wait one minute for the battery(ies) to start up.
4. On the primary battery, press the Power button for three seconds.

Note: The inverter's Communication card takes about seven minutes to start up.

5. After seven minutes, use the Installer Portal or the Schneider Home app to verify that the inverter is back online and that all batteries are providing power.

Note: The Installer Portal and Schneider Home app can only be used for monitoring if the system has been commissioned (using eSetup). If the system has not been commissioned yet, monitor the inverter's LED for the status of the system.

Turning the Battery On

Note: Battery charging will start when the ambient temperature reaches 41°F (5°C) OR when the battery's heater warms the battery cells to 41°F (5°C).

When used with the battery's Disconnect switch, the Power button activates the integrated BMS and turns the battery on.


To turn the battery On:

1. Turn the battery's Disconnect switch to the ON **I** position.
2. Wait 10 seconds.
3. Press the battery's Power button (short press, 0.5 seconds).

Turning the Battery Off

When used with the battery's Disconnect switch, the Power button deactivates the integrated BMS and turns the battery off.

To turn the battery Off:

1. Press the battery's Power button for six seconds or more.
2. Turn the battery's Disconnect switch to the  (open) position.

6 Monitoring

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Monitoring the Schneider Boost

During commissioning, the Schneider Boost(s) are automatically detected and can be configured along with the Schneider Inverter.

After commissioning, qualified personnel can monitor the Schneider Boost and Schneider Inverter using [Installer Portal](#).

Home owners can use the Schneider Home app to monitor their system.

7 Maintenance and End of Life

What's in This Chapter?

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Replacing Fuses	79
Recycling and Disposal	80

Maintenance

Visually inspect the battery exterior to verify that:

- It is free of debris. If necessary, clean the battery exterior with a lint-free, soft cloth.

<i>NOTICE</i>

RISK OF EQUIPMENT DAMAGE

- | |
|---|
| <ul style="list-style-type: none">▪ Use only a soft cloth dampened with water and mild soap to clean the battery.▪ Do not use solvents or chemicals that are corrosive or flammable. |
|---|

Failure to follow these instructions can result in equipment damage.

- All doors are left closed.
- All wires, conduits (and seals) remain undamaged.

Replacing Fuses

DANGER

HAZARD OF ELECTRIC SHOCK, FIRE, EXPLOSION AND ARC FLASH

- Do not remove the fuse access cover. Access is restricted to personnel authorized by Schneider Electric.
- Prior to servicing the fuses, authorized personnel must verify that all fuse terminals are de-energized, using the probe holes on the internal fuse cover.
- Replace the Schneider Boost fuses only with 60 A, 700 VDC fuses: Mersen MEV70V60-S.

Arc Flash Information for Fuse Servicing:

- 18.4 cal/cm² ▪ Incident Energy at a Working Distance of 18 in.
5 ft 9 in. ▪ Arc Flash Boundary

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

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, AND FIRE

- If you have authorization from Schneider Electric to replace the fuses, apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- Never energize the system or turn the battery disconnect switch(es) to the ON position with the covers removed.
- Always use a voltage sensing device, rated 600 V or higher to confirm all circuits are de-energized.
- The Schneider Boost is energized from multiple sources. Before opening the covers, de-energize, lock-out and tag out all power sources, and wait five minutes for circuits to discharge.

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

1. De-energize the system, following Lock-Out and Tag-Out (LOTO) on page 35.
2. Turn the DC disconnect switch to the OFF position
3. Remove all screws from the panel above the DC disconnect switch.
4. Replace the fuse(s) with the same or equivalent type of fuse (see table below). Follow the instructions that are provided with the new fuses.

Ordering P/N	Rated Current (A)	Rated Voltage (VDC)
MEV70V60-S	60	80

5. Reinstall the cover.
6. Follow the start-up procedure for the connected inverter, system equipment, and battery.

Recycling and Disposal

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- This equipment must only be disassembled or recycled by qualified personnel.
- Do not attempt to open, disassemble, repair, tamper with, or modify the battery. The battery cells are not replaceable.
- Do not drop, deform, impact, cut or spear with a sharp object. Damage to this equipment may cause electrolyte leakage.
- Do not dispose of the Schneider Boost in a fire or with general household waste. Always follow local guidelines for recycling and disposal.
- Do not immerse the equipment or its components in water or other fluids.

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



Electric appliances marked with the symbol shown must be professionally treated to recover, reuse, and recycle materials in order to reduce negative environmental impact. When the product is no longer usable, the consumer is legally obligated to ensure that it is collected separately under the local electronics recycling and treatment scheme.

8 Emergency Response

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Emergency Response for the Schneider Boost

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- If there are any signs of smoke, unusual smell, or excessive heat coming from the Schneider Boost, evacuate the area and call local emergency response teams.
- In case of a flood: If any part of the battery or wiring is submerged, stay out of the water.

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

If the battery generates smoke or excessive heat, follow these steps:

1. If it is safe to do so, turn the AC disconnect for the system to the OFF position.
2. If a Rapid Shutdown (RSD) switch is installed, and if it is safe to do so, turn the switch to the OFF position.
3. Evacuate the area.
4. Call the local fire department and emergency response team(s) and inform them that there is a potential chemical fire involving a Lithium Iron Phosphate (LFP) battery.

In case of flooding:

1. If any part of the battery or wiring is submerged, stay out of the water.
2. If possible, stop the source of the water, and pump it away.
3. Call your installer to arrange an inspection.

9 Specifications

What's in This Chapter?

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Specifications

Note: Specification are subject to change without notice. See se.com for the latest specifications.

System Specifications

Table 9 System information

System Information	10 kWh	20 kWh	30 kWh
Boost Battery Configurations			
Battery quantity	1	2	3
Usable Energy Capacity	10 kWh	20 kWh	30 kWh
ESS Model Name	Boost-ESS [7.7 kW, 10 kWh]	Boost-ESS [7.7 kW, 20 kWh]	Boost-ESS [7.7 kW, 30 kWh]
AC Charge/Discharge Power - Paired with Schneider Inverter HY8K1NA1			
Continuous Output Power - Backup	7.68 kW		
Peak Output Power - Backup	15.4 kW (10 seconds)		
Continuous Output Power - Grid-Tied	5 kVA	7.68 kVA	7.68 kVA
Charge Power	5 kW	7.68 kW	7.68 kW
Compatibility			
Required for Backup Power	Pulse CSED with Backup Control Module (CC18X18M200PCZ) or Pulse Backup Controller (BC200A1NAWM)		
Required Inverter*	Schneider Inverter 7.7 (HY8K1NA1)		
# of Batteries	3 Maximum		
Battery Charging Sources	Solar, Grid		
*Schneider Boost (BAT10K1) must only be installed with the Schneider Inverter (HY8K1NA1)			

Electrical Specifications

Table 10 Electrical Specifications

Electrical Specifications (BAT10K1)	
Battery Voltage - Nominal / Max	422.4 / 468 V
Nominal Discharge Current	20 A
Max. Continuous Discharge Power	8.1 kW
Nominal Charge Current	14 A
Max. Continuous Charge Power	5.2 kW
Charge/Discharge Voltage Range	390-468 V
Battery Capacity/Energy	25 Ah/10.56 kWh
Max. Short Circuit Current and Duration	2750 A, 2.7 ms
Maximum Operating Temperature Range	5 to 131°F (-15 to 55°C)
Recommended Temperature Range	32 to 86°F (0 to 30°C)
Storage Temperature	14 to 104°F (-10 to 40°C)
Maximum Altitude	13100 ft (4000 m)
Operating Humidity	0 to 100% Non-Condensing
Battery Efficiency	96%

Physical Specifications

Table 11 Physical Specifications

Physical Specifications (BAT10K1)	
Enclosure Type	Type 4X
Inverter Dimensions (W × H × D)	25.6 × 22.4 × 6.5 in (65 × 57 × 16.5 cm)
Battery Dimensions (without feet) (W × H × D)	25.6 × 51.2 × 5.1 in (65 × 130 × 13 cm)
Battery Weight	279 lb (127 kg)
Shipping weight	331 lb (150 kg)
Battery Disconnect	Yes
Overcurrent Protection	Yes
Battery Installation	Wall (no stacking), Floor
Battery Part Number	BAT10K1, BAT-10
Compatible Inverter Part Number	HY8K1NA1
Cell Chemistry	LiFePO4 (LFP)
Warranty	≥70% Capacity for the earlier of 10 Years, or 30 MWh throughput

Regulatory Specifications

Table 12 Regulatory specifications

Regulatory Specifications	
Safety	UL9540, UL9540A, UL1973
Emissions	FCC Part 15 Class B, EN/IEC 61000-6-3, EN/IEC 61000-6-4
Requirement	Compliance standard
Immunity	EN/IEC 61000-6-1, EN/IEC 61000-6-2
Transportation and shipping	UN 38.3, ISTA-3E
Environmental	US public law, TCSA testing, RoHs, Reach, Prop 65, WEEE, EOLI, PEP
Seismic	AC 156
CEC listed	Yes

Schneider Electric

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