



CAUTION: Battery Damage

OutBack Power does not approve custom applications, including installation of lithium-ion batteries that have not been published as installable with OutBack Power equipment. Damage resulting from the use of these products is not covered by the limited warranty. See the *Mojave Operator's Manual* for more information.



IMPORTANT:
Not intended for use with
life support equipment.

About OutBack Power

OutBack Power™ is a leader in advanced energy storage and conversion technology. OutBack Power products include true sine wave inverter/chargers, batteries, maximum power point tracking charge controllers, and system communication components, as well as circuit breakers, accessories, and assembled systems.

Trademarks

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Warranty

The warranty for this product can be downloaded from www.outbackpower.com/downloads/warranty_and_safety/warranty_mojave
A copy is available by sending a self-addressed envelope to this address:

Contact Information

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Date and Revision

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Mojave™ Energy Storage System



The Mojave OGHESS8015A Energy Storage System (ESS) consists of the Mojave OGH18048A inverter (shown to the left) and the Mojave ESS lithium-ion battery (shown to the right). These products are designed to work in conjunction to add energy storage and backup capability to a PV system.

This *Mojave ESS Planning Guide* will describe how to physically integrate the two Mojave products.

- It supplements the *Mojave Quick Start Guide*, which describes installation of the inverter. 
- It also supplements the *Mojave ESS Operator's Manual*, which includes installation of the battery as well as many other topics. 

Please read both documents before beginning this *Planning Guide*.



WARNING: Burn Hazard

The vents (the sides of the product) may give off heated air. Install this product so that casual contact does not occur.



WARNING: Fire/Explosion Hazard

Do not place combustible or flammable materials within 12 feet (3.7 m) of the equipment. This unit employs mechanical relays and is not ignition-protected. Fumes or spills from flammable materials could be ignited by sparks.



WARNING: Personal Injury

Use safe lifting techniques and standard safety equipment when working with this equipment.



IMPORTANT:

Read all safety instructions before proceeding.



IMPORTANT:

- ❖ This document is for use by qualified personnel familiar with energy storage systems (ESS) and basic inverter functionality. Users of this document should meet all local and governmental code requirements for licensing and training for the installation of electrical power systems with AC and DC voltage up to 600 volts. This product is only serviceable by qualified personnel.
- ❖ Clearance and access requirements may vary by location.
 - ✓ Allow 8" (20.3 cm) on either side of the unit for ventilation.
 - ✓ A 36" (91.4 cm) clear space in front of the system for access is recommended.
 - ✓ Consult local electric code to confirm clearance and access requirements for the specific location. If this product is installed or used in a manner other than specified, the protection it provides may be impaired.
- ❖ This inverter is for use in backup power and AC-coupled applications. Use with independent solar charge controllers is not supported at this time.
- ❖ This product is designed and tested for stationary applications only. It is not listed or warranted for mobile use.



Mounting

1. Mark the locations of the battery mounting brackets. The brackets must be placed on wall studs with 16" spacing, or on plywood or similar mounting material to give appropriate support. The lag screws for the brackets should be placed at 44.6" (113.3 cm) above the floor surface.

IMPORTANT

Do not install the battery brackets at this time. Mark the locations of the lag screws and drill pilot holes if necessary.

2. Mark the location of the inverter's wall bracket. The left-hand holes for the wall bracket should be located 78.2" (198.5 cm) above the floor surface. Drill pilot holes if necessary.

IMPORTANT

When installed, the inverter is required to hang 6" (15.2 cm) above the top of the battery in order to use the included raceway. The mounting bracket is placed according to this spacing. If a different spacing or configuration is used, new raceway will need to be provided.

3. Install the inverter's wall bracket as described in the *Mojave Inverter/Charger Quick Start Guide*.

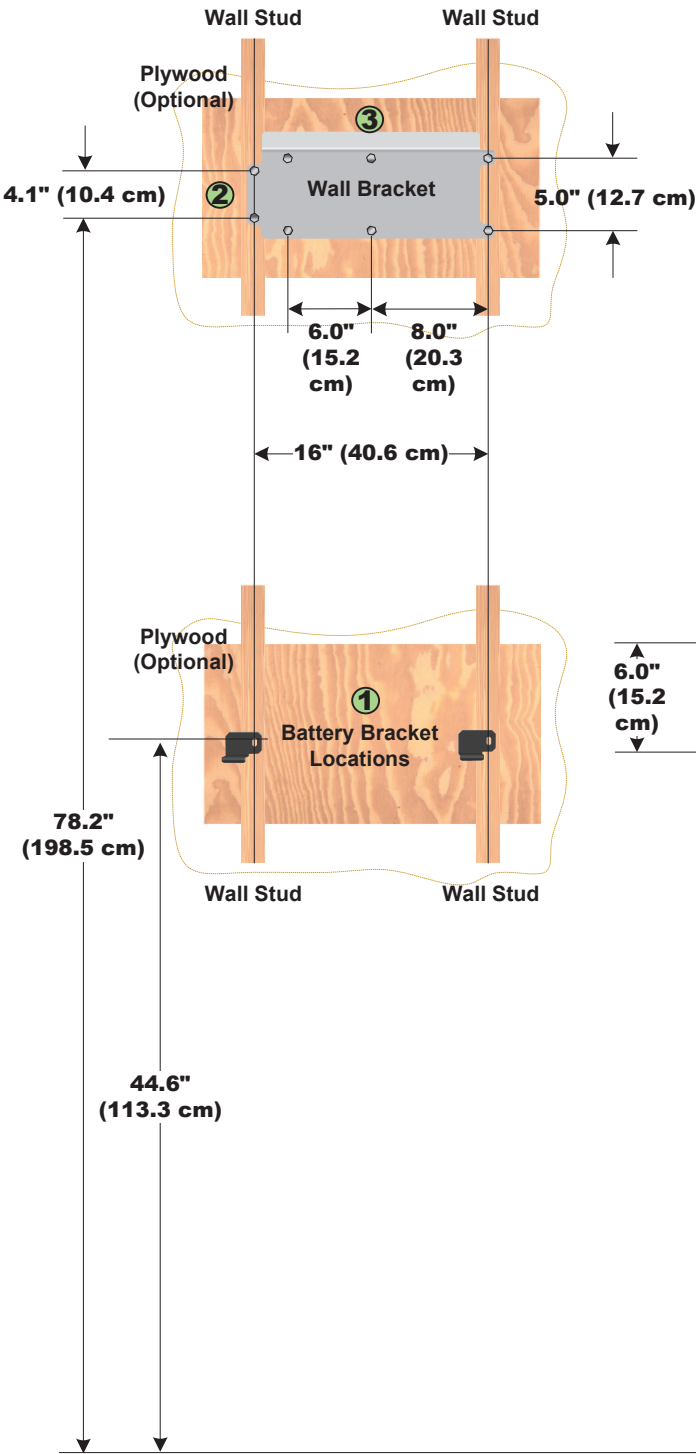
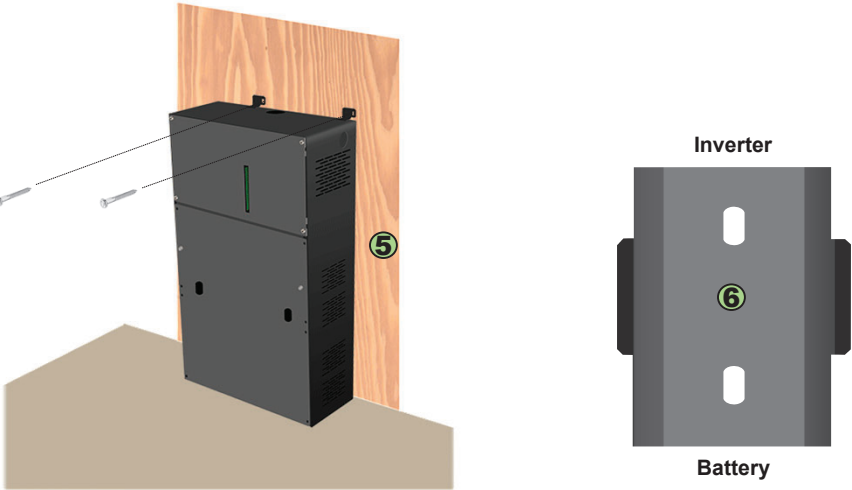
4. Complete the mounting of the inverter (not depicted here) according to the instructions in the *Quick Start Guide*. Install securing screws in the wiring compartment.

IMPORTANT

If any AC conduit is to be located in the 6" space between the inverter and the battery, install it at this time.

5. Place the battery against the wall. Install the brackets as described in the *Mojave ESS Operator's Manual* and the image below.

6. Install the wiring raceway as shown below. Two screws are provided to attach it to the surface. Install into plywood or a reinforced mounting surface if available. If a reinforced surface is not available, anchors are provided in the kit for mounting into wall board.



IMPORTANT

Install all DC wiring within the raceway. AC wires may not be installed within the raceway.

NOTE:

Install AC and other wiring in an order appropriate to the installation. See the *Quick Start Guide* for more information.

Wiring

1. Install ground conductor in battery and inverter. Tighten to the torque value shown.
2. Install battery negative (–) conductor. Read the following before tightening.

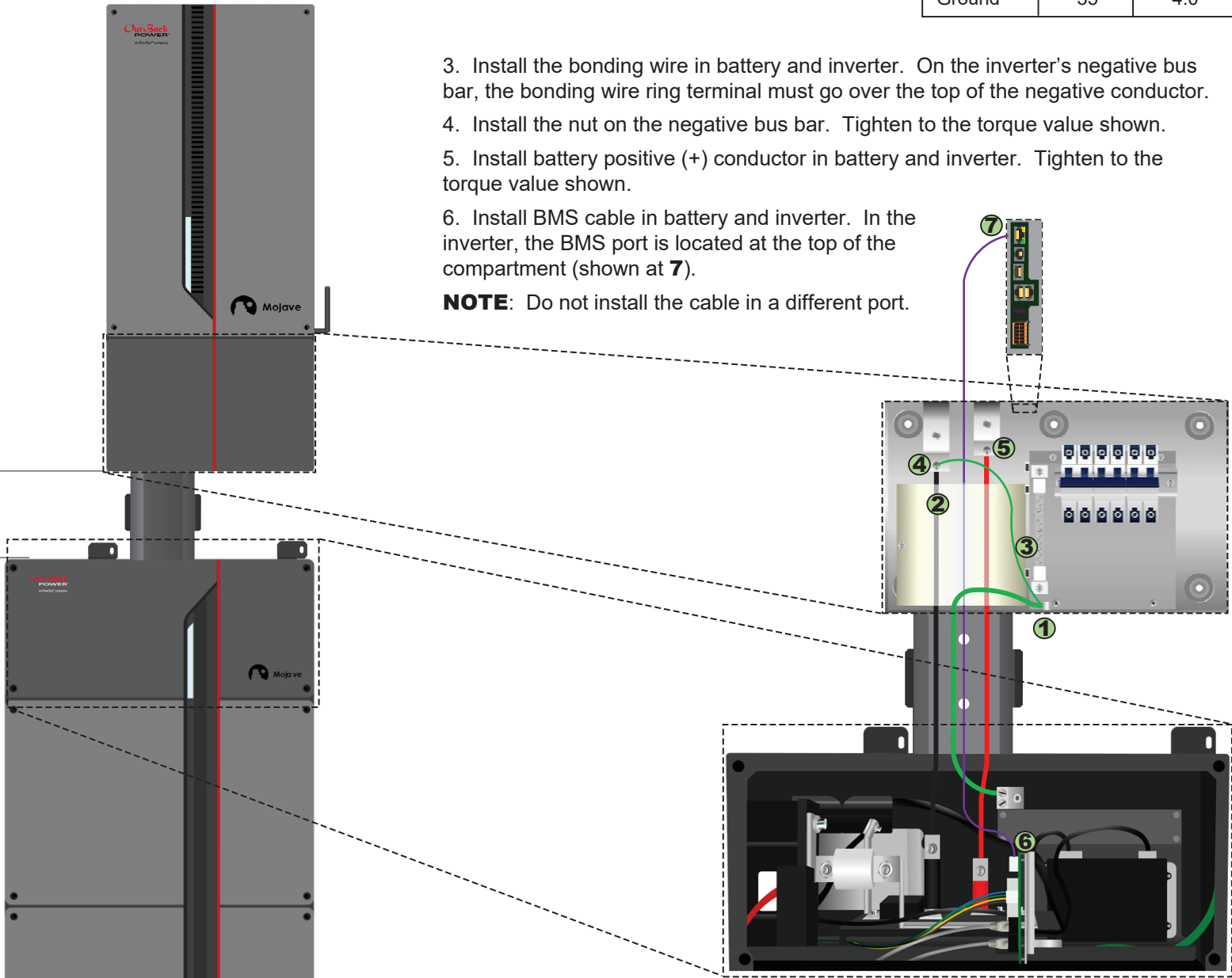
WARNING: Shock Hazard

The negative conductor must be mechanically bonded to the ground bar. This is normally performed within the Mojave inverter (between points **1** and **4**). A bonding wire is supplied for this purpose.

Torque Values		
Conductor	In-lb	Nm
Battery + and –	65 to 75	7.3 to 8.5
Ground	35	4.0

3. Install the bonding wire in battery and inverter. On the inverter's negative bus bar, the bonding wire ring terminal must go over the top of the negative conductor.
4. Install the nut on the negative bus bar. Tighten to the torque value shown.
5. Install battery positive (+) conductor in battery and inverter. Tighten to the torque value shown.
6. Install BMS cable in battery and inverter. In the inverter, the BMS port is located at the top of the compartment (shown at **7**).

NOTE: Do not install the cable in a different port.



Installation is complete. Install all covers. Follow the commissioning steps in each respective manual.