

Installation & Operations Manual

SAFE-BBU-1000 Battery Back Up



Battery Installation

1. Attach the included 4-wire battery cable to the battery pack as shown at right.
2. Install the battery pack on the right side of the BBU shelf, with the cable to the front side of the battery pack. Larger systems may require 2 battery packs.
3. Connect the other end of the battery cable to the right battery input port on the front panel (for single packs).
4. Secure the battery pack using the included white retention bracket by inserting the flat edge of the bracket into the guide slot at the top, then securing the bottom of the bracket to the battery shelf using the #6 - 32 screw provided.
5. If the BBU requires a second battery pack, repeat the installation on the left side of the BBU shelf, and connect the battery cable to the left battery input port on the front panel.



BBU Startup

1. Connect AC power to the BBU "AC power input" terminals with three wires: line, neutral and ground. Maximum power is 200 watts so choose conductor size appropriately. (See image to the right.)
2. After the AC connections are secured, install the provided terminal block cover over the exposed contacts. Secure the AC cable to the black cable mount in the center of the panel. Note: The BBU requires AC power to turn on initially.
3. With the BBU system power switch in the off position, connect the provided 8-pin power cable from the BBU 12V power output port to the BDA 12V DC input port.
4. First turn the BBU power switch on, then turn the BDA power switch on. Follow this sequence any time the BBU system power switch is turned on.
5. The BBU LED status indicators should be in state 1 upon initial power-up. See "Led Indicators" below.



LED Indicators

AC POWER	●	●	●	●	●	●	●	●	●	●
BATTERY	●	●	●	●	●	●	●	●	●	●
STATUS	●	●	●	●	●	●	●	●	●	●
STATE	1	2	3	4	5	6	7	8	9	10

- Grey Circle indicates LED off.
- White Dotted Circle indicates LED may flash red or green depending on current state when alarm occurred.
- ◌ Dashed Circle indicates flashing LED.

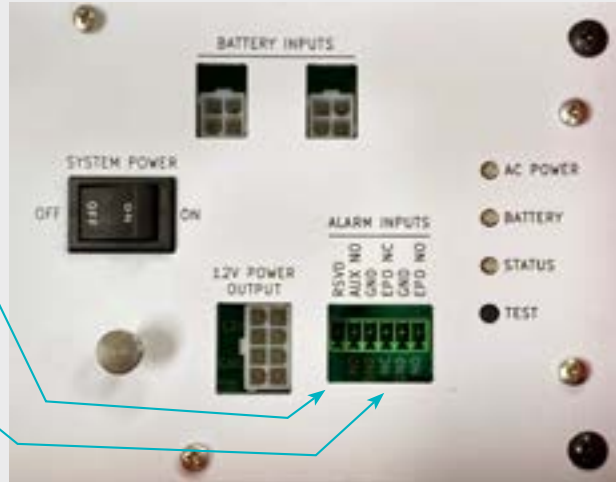
State Descriptions

1. AC on, battery charging/balancing.
2. AC on, battery charged.
3. AC off, battery powered.
4. AC on, charger failure (not connected).
5. AC off, low battery voltage: (slow red/green flash).
6. External AUX alarm active.
7. External EPO engaged.
8. Battery over current.
9. Battery error: fast flashing (battery and status LEDs indicate blown fuse or cell out of range).

Port Diagram

The "AUX" alarm can be used to trigger the BDA system alarm from a third-party device such as a motion detector or a room door switch. An external normally open contact is required to be connected between the "AUX NO" and "GND" terminals.

The Emergency Power Off (EPO) feature requires an external normally open switch. When the switch is closed, the BBU will cut off the DC power to the BDA. Connect the NO switch to the terminal labeled "GND" and "EPO NO". (A normally closed external switch option is available as a factory setting.)



Alarm Testing

1. Low Battery Voltage Level Alarm

Disconnect the 4-wire cable jumper that runs between the battery and the front panel. This will trigger a low battery level alarm. Reconnect to clear the alarm. If two battery packs are installed, both must be disconnected to trigger the alarm. Always keep the two batteries at a similar charge level. If connected, both should be connected. If disconnected, both should be disconnected. If the two batteries are at a different charge level, you can experience a larger surge of current between the two batteries upon connecting them. This is undesirable and dangerous. It could damage the equipment.

2. Battery Charger Alarm

Press "TEST" button on front panel (located under the LEDs). This will trigger the battery charger fail alarm. Press again to reset alarm.

3. AC Power Alarm:

Disconnect AC power source. This will trigger the AC alarm. Reconnect AC power to reset alarm.

Please contact technical support for questions regarding installation.

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