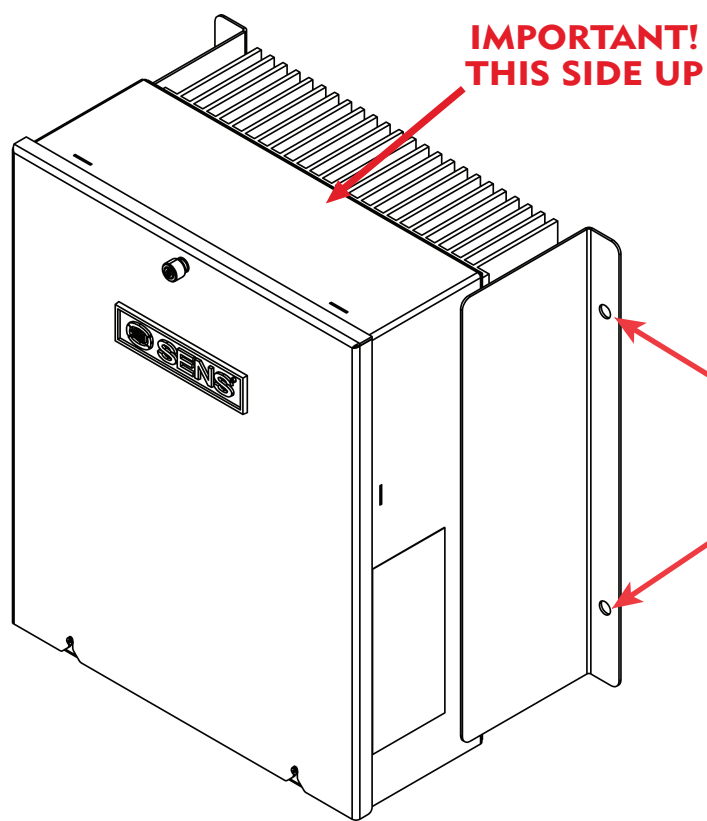


# Getting Started

# BCS-120

## Battery Control System

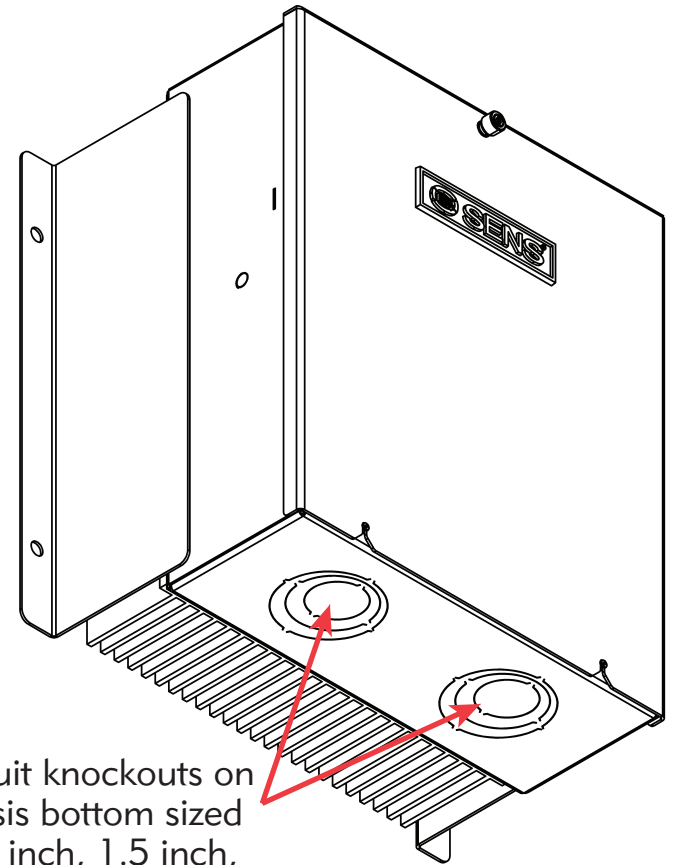
## Mounting



**IMPORTANT!  
THIS SIDE UP**

Mounting holes sized for 5/16 inch hardware

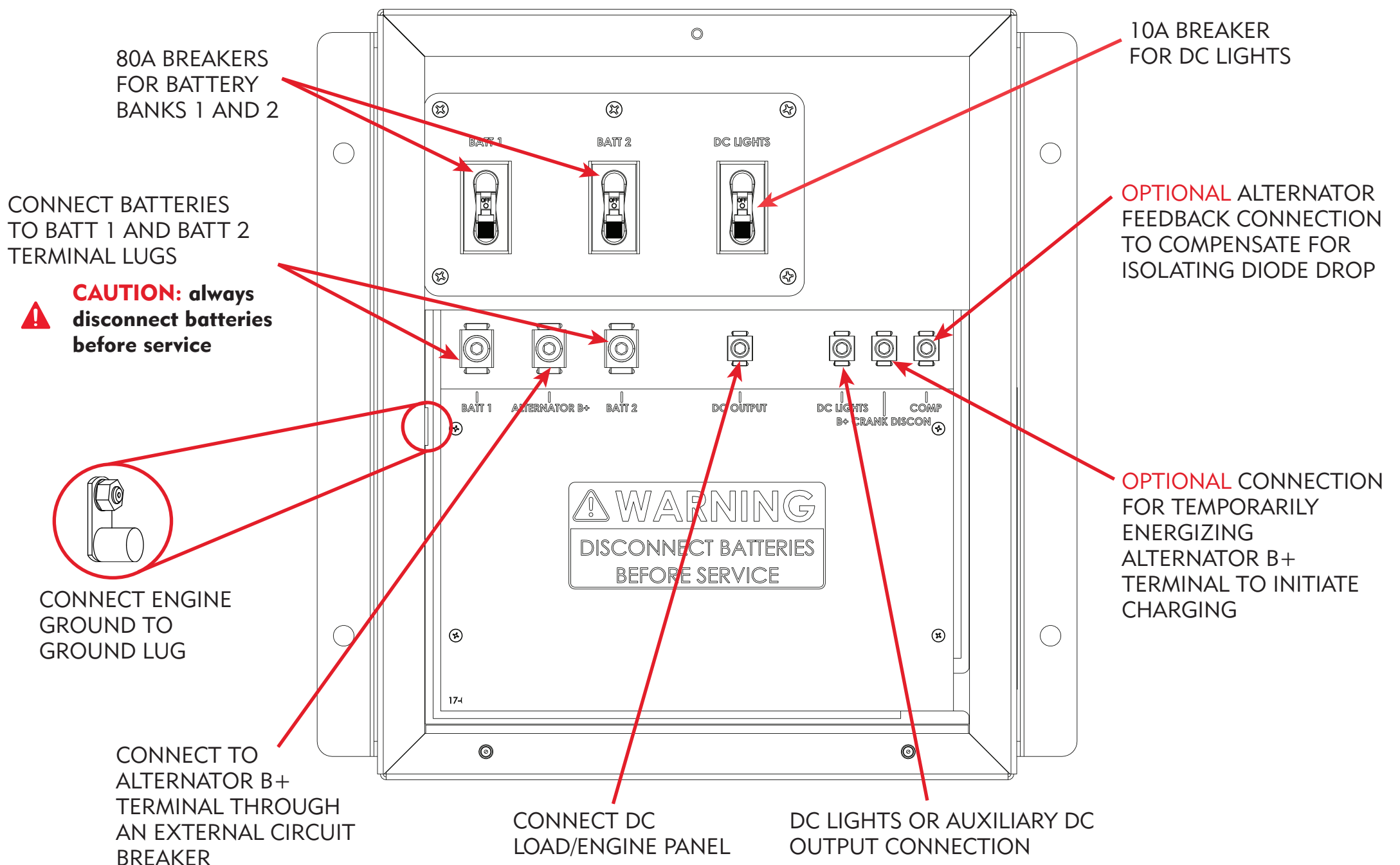
**IMPORTANT:** ENSURE MOUNTING HARDWARE IS ENGINEERED FOR THE WEIGHT AND LOCAL SEISMIC REQUIREMENTS.



Conduit knockouts on chassis bottom sized for 1 inch, 1.5 inch, and 2 inch conduit

## Connections

Note - remove cover to access connections

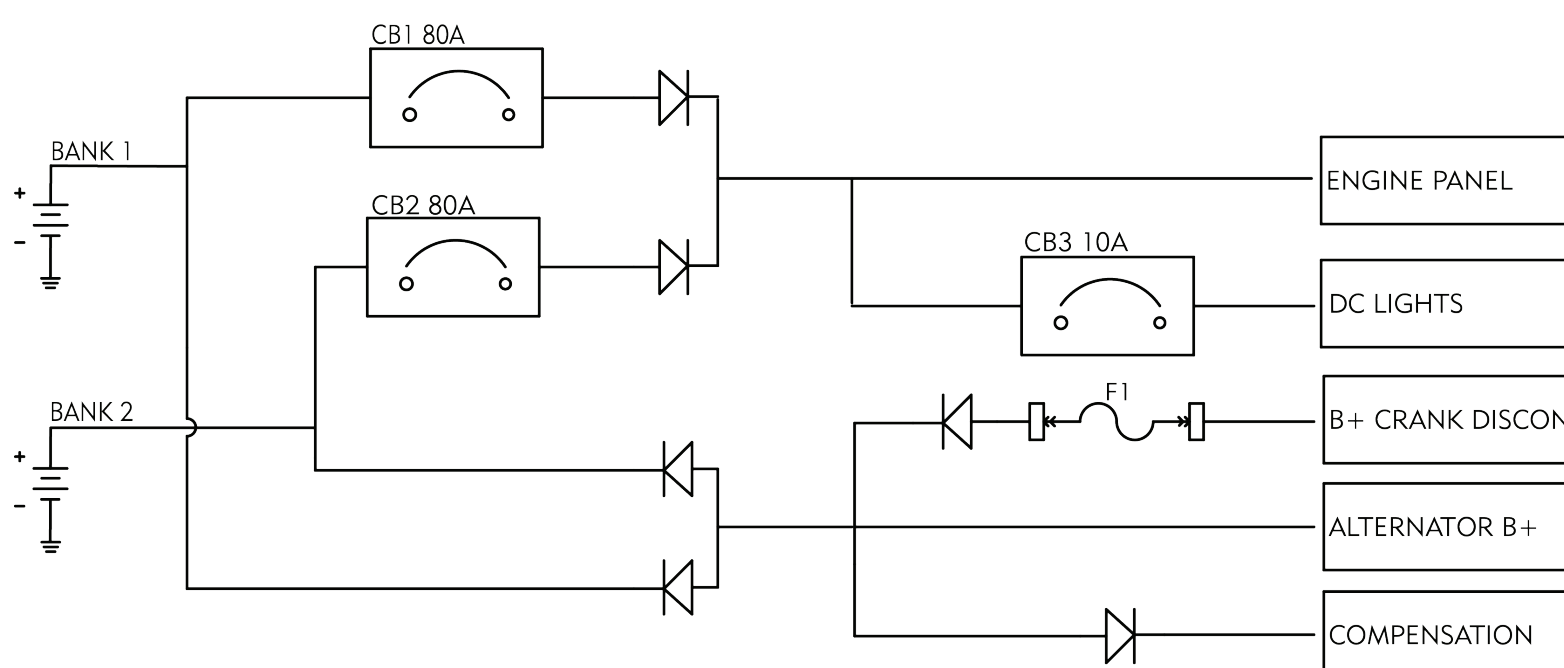


## Installation/Operation

The Battery Control System (BCS-120) delivers power from two different isolated battery banks to DC loads, such as the engine control panel and ancillary DC loads. Additionally, the BCS-120 distributes a single alternator charge feed to the two isolated battery banks.

- **Operating Voltage: 32V Max**
- **Operating DC Current: 80A max, 64A continuous**
- **Continuous Alternator B+ Current: 120A Max**
- **DC Lights Current: 10A max, 8A continuous**
- **Typical full load voltage drop: 0.4V**
- **Operating Temperature: -40° to 55°C (indoor use only)**
- **Battery and Alternator Connections: terminals accept 1/0 - 8 AWG, refer to National Electrical Code for wire gauge selection**
- **Other Connections: terminals accept 3 - 14 AWG, refer to National Electrical Code for wire gauge selection**
- **Hex Size for All : 4mm**

- 1 - Connect engine ground (grounded DC negative) to ground lug inside chassis
- 2 - Connect battery bank 1 to BATT 1
- 3 - Connect battery bank 2 to BATT 2
- 4 - Connect alternator to ALTERNATOR B+ through an external circuit breaker
- 5 - Connect DC load or engine panel to DC OUTPUT
- 6 - **Optional** connection can be made to B+ CRANK DISCON to temporarily energize the ALTERNATOR B+ terminal and initiate charging
- 7 - **Optional** connection can be made to COMPENSATION as an alternator feedback connection to compensate for the isolating diode drop



## IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** –This guide contains important safety and operating instructions for Battery Control System 120.
2. DO NOT EXPOSE THIS PRODUCT TO RAIN OR SNOW.
3. ONLY TRAINED AND QUALIFIED PERSONNEL MAY INSTALL AND SERVICE THIS PRODUCT.
4. Do not operate the product if it has received a sharp blow, been dropped, or otherwise damaged in any way; shut off power and have the unit serviced or replaced by qualified personnel.
5. HOT SURFACE - this battery control system should be installed so that it is not likely to be contacted by people.
6. **WARNING – RISK OF EXPLOSIVE GASES**
  - 6.1 **WORKING IN THE VICINITY OF A BATTERY IS DANGEROUS. STORAGE BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOU READ THIS DOCUMENT AND FOLLOW THE INSTRUCTIONS EXACTLY.**
  - 6.2 To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of a battery. Review cautionary markings on these products and on the engine.
7. **PERSONAL PRECAUTIONS**
  - 7.1 Someone should be within range of your voice or close enough to come to your aid when you work near a storage battery.
  - 7.2 Have plenty of fresh water and soap nearby in case battery electrolyte contacts skin, clothing, or eyes.
  - 7.3 Wear complete eye protection and clothing protection. Avoid touching eyes while working near a storage battery.
  - 7.4 If battery electrolyte contacts skin or clothing, wash immediately with soap and water. If electrolyte enters eye, immediately flood the eye with running cold water for at least 10 minutes and get medical attention immediately.
  - 7.5 **NEVER** smoke or allow a spark or flame in vicinity of battery or engine.
  - 7.6 Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short circuit battery or other electrical part that may cause explosion. Using insulated tools reduces this risk, but will not eliminate it.
  - 7.7 Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a storage battery. A storage battery can produce a short circuit current high enough to weld a ring or the like to metal, causing a severe burn.