

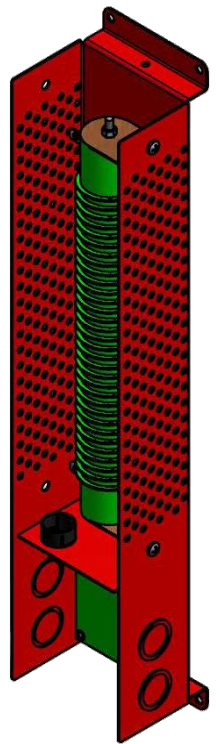


MNCHINOOK DIVERSION LOAD

PRODUCT SPECIFICATIONS MANUAL

The MidNite Chinook Diversion Load (MNCDL) is an integrated solution designed to prevent 12, 24 or 48 volt batteries from overcharging. It is designed to be used with 300 Watt or smaller turbine systems.

Compact and easy to install, the CDL incorporates a 300 Watt resistive heating element and controller board in a powder coated steel enclosure.



17722 67th AVE NE
Arlington, WA 98203
P:360-403-7207
F:360-691-4862
www.midnitesolar.com



CHINOOK DIVERSION LOAD

SPECIFICATIONS- 300 WATT MODELS

Operation

- PWM (Pulse Width Modulation) for highest charging performance without flicker
- Three Stage Charging
- Selectable for sealed or flooded batteries using jumper
- Status and fault indicator LEDs
- Connects directly to the battery bank

12V Version **MNCDL300-12**

- Operating voltage range: up to 15VDC
- Recommended fuse or circuit breaker: 30 Amps
- Integrated Load Resistor: 0.75 Ohm, 300 Watt, wire wound

24V Version **MNCDL300-24**

- Operating voltage range: up to 30VDC
- Recommended fuse or circuit breaker: 15 Amps
- Integrated Load Resistor: 3 Ohms, 300 Watt, wire wound

48V Version **MNCDL300-48**

- Operating voltage range: up to 60VDC
- Recommended fuse or circuit breaker: 10 Amps
- Integrated Load Resistor: 12 Ohms, 300 Watt, wire wound



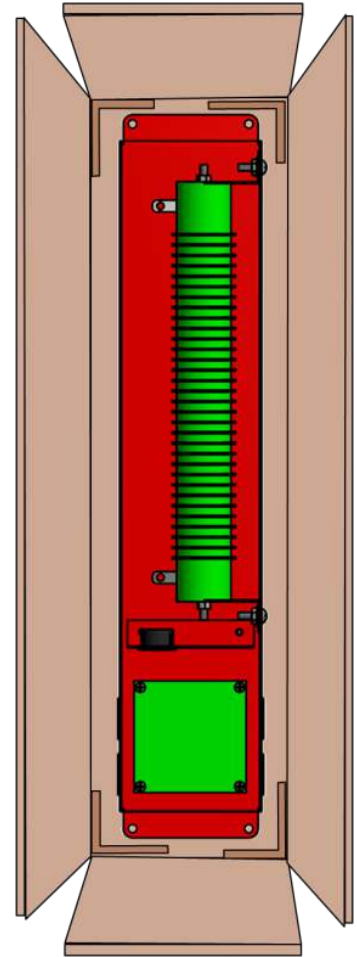
Important! The battery jumper comes pre-set from the factory for a specific battery voltage. The load resistor is specific to this same voltage. Do not change the battery jumper to a different voltage unless you also install the correct resistor for that battery voltage. Use the correct clipper for your battery bank.

Weight & Dimensions

- Dimensions: 88mm wide, 95mm tall, 470mm long (3.375 x 3.75 x 18.5in)
- Weight: 1.94kg (4.28lbs)
- Shipping Dimensions: 102mm wide, 108mm tall, 508mm long (4.0 x 4.25 x 20in)
- Shipping Weight: 2.15kg (4.75lbs)

Materials

- Enclosure: 18 gauge mild steel, powder coated red
- Circuit Board: double sided, plated through holes, solder mask, silk screen, gold plating
- Hardware: stainless steel, zinc plated steel, aluminum and Nylon
- Shipping Carton: corrugated cardboard.



⚠ DANGER

DANGER: Electrical shock or burn hazard. Installation of this Dump Load should only be made by qualified personnel. Failure to lockout electrical power during installation or maintenance can result in fatal electrocution or severe burns.

CAUTION

CAUTION: This unit must be installed in accordance with the National Electrical Code (ANSI/NFPA-70) and applicable local codes.

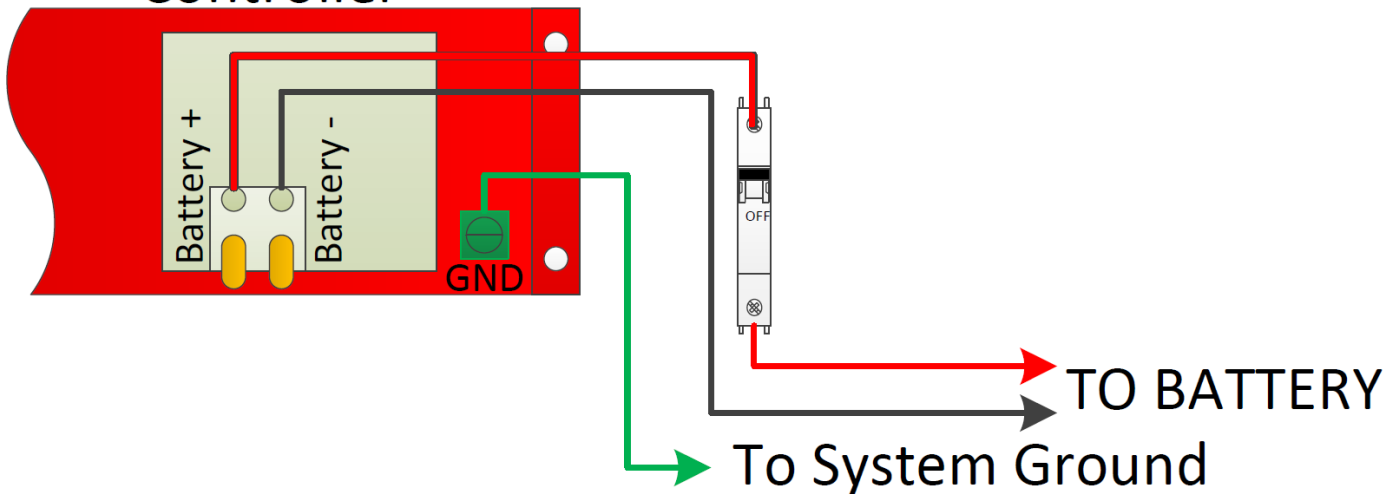
CAUTION

CAUTION: Check to make sure system voltages do not exceed the MNCDL voltage requirement and the correct MNCDL voltage/model has been selected.

Setup

The circuit board has 3 jumpers to set and a terminal block for 3 wires to connect. The wires are Ground, Battery negative and Battery positive. Using the proper breaker is extremely important as the resistor could over heat and cause fire if the proper breaker is NOT used. We recommend a (MNEPV30) 30 amp breaker for 12 volt battery, a (MNEPV15) 15 amp breaker for a 24 volt battery and a (MNEPV8) 8 amp breaker for a 48 volt battery. Shown below is the proper wiring of the diversion controller. If you have another charging source, it is important that the other charging source is set to regulate before the CDL does. For example, we do not want the poor little 300 watt resistor trying to divert 5,000 watts of solar. This is why breaker size is important.

Chinook Diversion Controller



The terminal block for the positive and negative battery wires can accept #10-24 AWG. It is recommended to use #10 wire for this connection.

The Jumpers need to be set according to the battery type you have. There are 3 jumpers to set on the diversion controller but we NEVER want to change Con1:

Con1- This selects the nominal battery voltage. Please note this should NOT be changed unless the resistor is changed as well, otherwise fire and injury may occur. This jumper should **NEVER** be changed under normal conditions.

Con 2&3- These will set the unit for sealed batteries or flooded batteries as well as 3 stage charge or just plain diversion. Below is a table showing the values that correspond to this jumper. Con3 will switch between 3 stage charging (3ST) and simple single voltage diversion (OVP). Simply pick the style of charging and the voltages you want for regulation and set Con2 and Con3 accordingly.



Jumpers		12 volt	24 volt	48 volt
CON2-SLD, CON3-3ST	Sealed	14.1 v	28.2 v	56.4 v
CON2-FLD, CON3-3ST	Flooded	14.4 v	28.8 v	57.6 v
CON2-SLD, CON3-OVP	Diversion Sealed	15.1 v	30.2 v	60.4 v
CON2-FLT, CON3-OVP	Diversion Flooded	15.9 v	32.0 v	64.0 v

NOTE: To run the equalize cycle on the inverter or other charge controllers, simply turn off the breaker on the diversion controller and run your EQ charge. After the EQ charge is complete do NOT forget to turn the breaker back on.

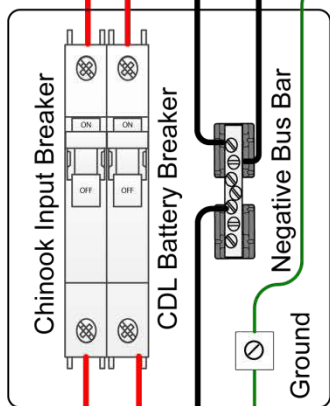
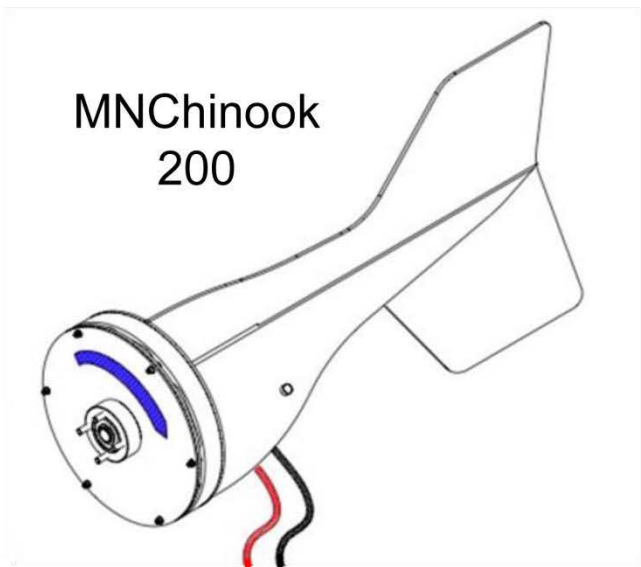
Connections

- Spring lever terminals for Battery + and Battery -
Accepts #10-24 AWG
- Two 1/2" / 3/4" concentric NPT knockouts and two 1/2" NPT knockouts

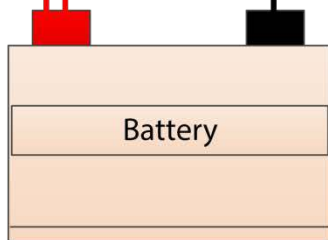


Mounting

- Mounts to vertical concrete, metal, or other non-flammable surface
- Uses four #10 screws
- Body sits 19mm out from wall
- NEMA 1 enclosure for indoor mounting



Refer to the Chinook and CDL manuals for circuit breaker and wire sizing information





MIDNITE SOLAR INC. LIMITED WARRANTY

MIDNITE SOLAR INC. LIMITED WARRANTY MidNite Solar Power electronics, sheet metal enclosures and accessories MidNite Solar Inc. warrants to the original customer that its products shall be free from defects in materials and workmanship. This warranty will be valid for a period of five (5) years for all products except the MNBRAT Charge Controller, MNBIRDHOUSE1 batteries, and MNChinook turbines. These will be two (2) years.

MidNite Solar will not warranty third party inverter components used in MidNite's pre-wired systems. Those components are warranted by the original manufacturer.

At its option, MidNite Solar will repair or replace at no charge any MidNite product that proves to be defective within such warranty period. This warranty shall not apply if the MidNite Solar product has been damaged by unreasonable use, accident, negligence, service or modification by anyone other than MidNite Solar, or by any other causes unrelated to materials and workmanship. The original consumer purchaser must retain original purchase receipt for proof of purchase as a condition precedent to warranty coverage. To receive in-warranty service, the defective product must be received no later than two (2) weeks after the end of the warranty period. The product must be accompanied by proof of purchase and Return Authorization (RA) number issued by MidNite Solar. For an RMA number contact MidNite Solar Inc., 17722 67th Ave NE, Arlington, WA 98223 (360) 403-7207. Purchasers must prepay all delivery costs or shipping charges to return any defective MidNite Solar product under this warranty policy. Except for the warranty that the products are made in accordance with, the specifications therefore supplied or agreed to by customer:

MIDNITE SOLAR MAKES NO WARRANTY EXPRESSED OR IMPLIED, AND ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE FOREGOING WARRANTY IS HEREBY DISCLAIMED BY MIDNITE SOLAR AND EXCLUDED FROM ANY AGREEMENT MADE BY ACCEPTANCE OF ANY ORDER PURSUANT TO THIS QUOTATION. MIDNITE SOLAR WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES, LOSS OR EXPENSE ARISING IN CONNECTION WITH THE USE OF OR THE INABILITY TO USE ITS GOODS FOR ANY PURPOSE WHATSOEVER. MIDNITE SOLAR'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE CONTRACT PRICE FOR THE GOODS CLAIMED TO BE DEFECTIVE OR UNSUITABLE.

Products will be considered accepted by customer unless written notice to the contrary is given to MidNite Solar within ten (10) days of such delivery to customer. MIDNITE SOLAR is not responsible for loss or damage to products owned by customer and located on MIDNITE SOLAR'S premises caused by fire or other casualties beyond MIDNITE SOLAR's control. This warranty is in lieu of all other warranties expressed or implied.

MIDNITE SOLAR INC. 17722 67TH AVE NE ARLINGTON, WA 98223

Email:

info@midnitesolar.com

PH: 360-403-7207 FAX: 360-691-6862