

Nivel THUNDERBULL Charger Specification Sheet:



Part number 6031 and 6032

Part Number 6031:

Ferro-Resonant Transformer 120 Volts AC Input With 48 Volt DC Output.
Output DC Rating Is 13 Amps @ Start Rate
AC Input Is 120 VAC 60Hz And Uses A 20 Amp Dedicated Line Fuse (Breaker)
AC Cord Is A Three Wire Conductor With Ground Wire
DC Cord Is A Three Wire Conductor With Relay Activation Wire
Charger Designed To Charge DC Battery Pack Rated At 48 VDC 180~220 AH

Measurements = 8 1/8" H X 9 3/4" L X 8 3/4" W
Weight = 28 Pounds

Part Number 6032:

Ferro-Resonant Transformer 220 Volts AC Input With 48 Volts DC Output.
Output DC Rating Is 13 Amps @ Start Rate
AC Input Is 220 VAC 50Hz And Uses A 20 Amp Dedicated Line Fuse (Breaker)
AC Cord Is A Three Wire Conductor With Ground Wire
DC Cord Is A Three Wire Conductor With Relay Activation Wire
Charger Designed To Charge DC Battery Pack Rated At 48 VDC 180~220 AH

This charger is designed to work with existing On-Board Computer System.
The On-Board Computer Starts and Ends the charge process.

Charge characteristics are controlled by battery pack voltage in relationship to battery charger transformer curve. The computer monitors this curve for finish rate and shut off.



Caution: The charging process creates hydrogen gas which is explosive. Use the charging system in a well ventilated area. Make sure battery pack is in good working order! Make sure AC wiring and DC wiring is in good working order. Make sure AC and DC power is removed while servicing the charger. Keep charger away from flammable materials. Keep charger away from wet area's and rain. Make sure charger air flow vents are not blocked. Pull AC cord from wall socket to disable the charger before disconnecting DC cord (if charger is in the run mode). Make sure all AC lines are up to local code. It is recommended to install surge arrestors in power lines for protection from lighting strikes. Disconnect the DC cord by pulling handle not the cord! Store DC cord off the floor/ground when not using with appropriate hanger. All repair should be performed by an experienced technician.

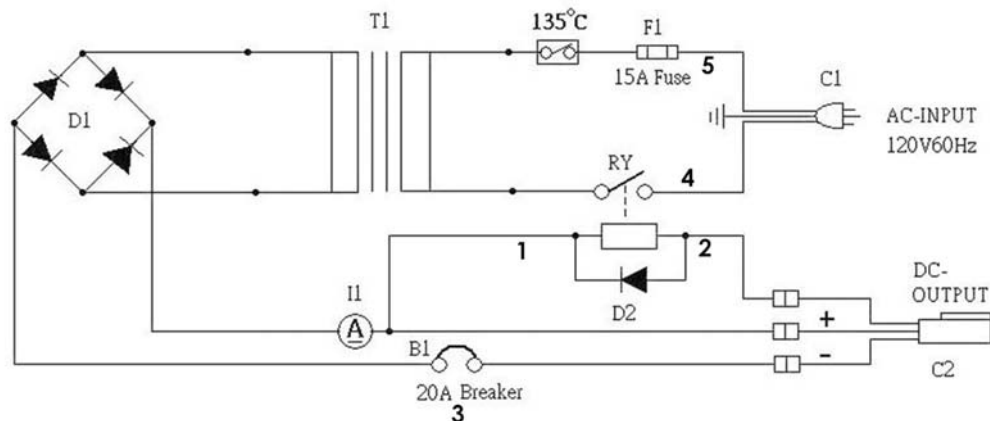


Wear Eye Protection!

Function:

Plug charger AC cord into AC line socket. Plug DC cord handle into car receptacle. Make sure handle is started straight and in inline with slot in receptacle. Push solid into receptacle making sure it is completely engaged. After a short delay you should hear an audible "click" inside the charger followed by transformer "hum". You should now see a 13 to 15 amp indication on the charger ammeter. After a short time you will see the charger shut off and restart, this is normal. At that point the computer is checking voltage to see the condition of the battery pack. The computer will do this once more toward the end of charge. Again that is a normal function. Once the battery pack voltage rises to a certain level we call a finish rate which will be in a range of 4 or 5 amps the computer monitors voltage for a period of time and then shuts off.

WIRING DIAGRAM



Replacement Parts Available for Purchase:

6033-Outer case
 6035-(I1)-Ammeter
 6036-(B1)-Circuit Breaker
 6037-(RY)-Relay
 6038-(D1)-Rectifier

Note: 220 volt versions are the same, where you see 120 below just read as 220.

Check these wires for 48 volts battery negative/positive, with car charger plugged in. Confirm you have 48 volt negative at the relay (2). Confirm you have 48 volt positive at the relay (1). Confirm you have a good 20A breaker (3). Confirm F1 fuse is in a conductive state. Confirm the AC-Input cord has 120 AC volts across 4 and 5 wires (plugged into wall socket). Confirm 135 C is in a closed position. Note: if you read 48 volts DC across the relay coil (plugged into car) and the relay does not "click" the relay is defective. If either voltage potential is missing you have an open in the wiring.