

## CP BATTERY CHARGER - CONSTANT POTENTIAL & CURRENT LIMITED

The CP-612 is a 6 Amp 12 Volt Charger  
The CP-524 is a 5 Amp 24 Volt Charger

### DESCRIPTION:

This Solid State Constant Potential Battery Charger is capable of charging a large range of batteries, such as Vented Lead Acid, Sealed Lead Acid or Nickel Cadmium batteries. Extreme low RF interference makes this charger ideal for many applications. The electronic protection against reverse connection and short circuit allows the charger to be left in circuit during cranking, and to be operated in parallel with a charging alternator.

In addition to recharging a discharged battery and maintaining it at a correct float potential this battery charger is also capable of supplying power to a standing load.

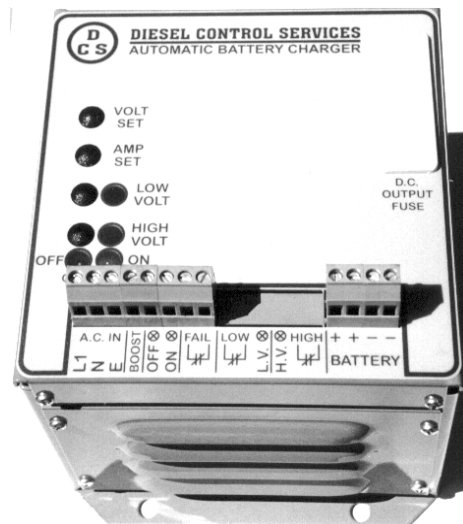


Figure 1 - The CP Charger

### PRINCIPLE OF OPERATION:

The initial charging of a fully, or partially discharged battery is controlled by the preset current limit. As the battery becomes more charged the current starts to drop and when this current falls below the current limit set point the constant potential control of the charger takes over, eventually maintaining a “trickle charge” to keep the battery fully charged. The correct and accurate constant potential of the charger is important to prevent overcharging or “gassing” of the battery, therefore prolonging the life of the battery.

A boost charge facility is provided as standard by switching the Boost terminal to - Ve. An optional boost timer is available to prevent the charger from accidentally being left in boost charge, which would result in excessive gassing of the battery. This Boost Timer also incorporates the boost On – Off switch, as well as indication of On, Off/Fail and Boost.

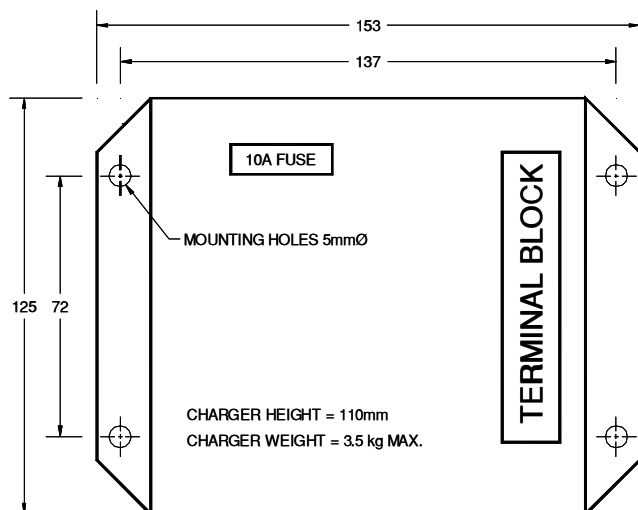
### FEATURES:

- Fully automatic Constant Potential and Current Limit
- Short Circuit Protection
- Protection against Reverse Polarity connection
- Boost Charge, with optional Automatic return to float conditions
- Facilities for indication of On and Off/Fail

## SPECIFICATION:

- Input Supply: .....220 – 240VAC 50 – 60Hz, 0.5A Full Load 12V  
0.6A Full Load 24V
- Output: .....By two parallel 15 Amp rated Power Transistors,  
electronically regulated to the current set by control  
circuitry.  
Set for 13.8VDC or 27.6VDC constant potential.
- Boost: .....By increase of the Constant Potential  
(0.35 Volt per cell).
- Charger Failure:.....The “Charger Failure” relay contact closes under  
the following conditions:
  - Loss of AC power
  - Failure of the DC output
  - Failure of the electronic circuitry
- Temperature range:.....-10 to +70 degrees Centigrade.
- Protection: .....Short Circuit  
Reverse polarity  
Over current  
Reverse Power
- Alarm output rating: .....Relay contact, 2 Amp resistive at 240V ac.

## DIMENSIONS & CONNECTIONS



### Terminal description

- BATT- - Battery negative
- BATT+ - Battery positive
- BOOST - Boost (switch to -Ve for Boost)
- FAIL - Charge fail contact, volt free, closed on fail
- ⊗ ON - +Ve output "Charger On"
- ⊗ OFF - +Ve output "Charger Off"
- E - Earth
- N - Input neutral
- A - Input active