BOLEC DCS

CPLH BATTERY CHARGER - CONSTANT POTENTIAL & CURRENT LIMITED LOW & HIGH ALARMS

The CPLH-612 is a 6 Amp 12 Volt Charger
The CPLH-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. This charger has two voltage sensing levels to give an alarm output should the output voltage move outside the set point limits. Local LED indication is provided and Battery Voltage Low and Battery Voltage High points can be adjusted with trim pots.

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 CPLH 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, Boost, Battery Low Volts, Battery High Volts and a Spare.

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).

Battery Low Voltage: ..... The Battery Low Voltage relay contact closes on falling battery voltage. ie: N/C contacts held open. Set to 9.9VDC or 19.8VDC falling.

Battery High Voltage: ..... The Battery High Voltage relay contact closes on rising battery voltage. ie: N/O contacts close on Hi. Set to 15.6VDC or 31.2VDC rising.

Charger Failure: ..... The Charger Failure relay contact closes under the following conditions:

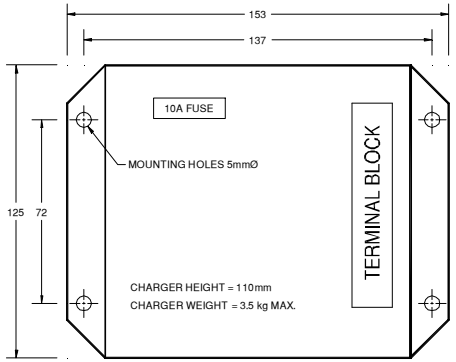
- Loss of AC power
- Failure of the DC output
- Failure of the electronic circuitry

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)
HIGH	- Battery high voltage contact
H.V.	- +Ve output "Battery High"
LOW	- Battery low voltage contact
L.V.	- +Ve output "Battery Low"
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