User Manual for CH-LF48V6-TSL

1. Overview

The CH-LF48V6-TSL charger is designed to work with BatterySpace' cell balancers during charging to achieve cell balancing. Standard safety features include protection against a short circuit on the charger output, reverse polarity, over charging, over temperature, etc.

2. Technical Parameters

2.1 Specifications

- Model: CH-LF48V6-TSL
- Efficiency: ≥88%
- Input voltage: 110V AC (220V AC available as special order)
- Input voltage range: AC 99-121V
- Output voltage: 56.8V, 6A
- Frequency: 40 ~ 60Hz
- Vibration: SAEJ1378
- Water resistance: IP31
- Power factor: ≥0.75

2.1 Operating Environment

- Altitude: ≤2000 Meters
- Temperature: -30°C ~ 55°C
- Installation Stress: ≤ level 5
- Humidity: 5% ~ 70% RH – Non Condensing, keep away from exposure to moisture
- Storage environment: -30°C ~ 60°C – Keep away from combustible materials

3. Charging Status and Alarm Status Indication

3.1 Alarm Indication

- Reverse polarity or low voltage: Red light blinking, 20% light on
- Charger over heating: Red light blinking, 40% light on
- Ambient temperature too high: Red light blinking, 60% light on
- Charging time out: Red light blinking, 80% light on
- Over Voltage Protection: Red light blinking, 100% lights on
- BMS alarm/charging interruptions All LED's blinking

3.2 Charging Status Indication

- Shutdown status: Six lights blinking
- Charging stage: Percent light indicating pack voltage vs. max charging voltage
- Battery presence not detected: Red light blinking, 20% light on
- Charging complete: All green lights on

4. Functions

4.1 Output short circuit protection.

4.2 Over-temperature protection:

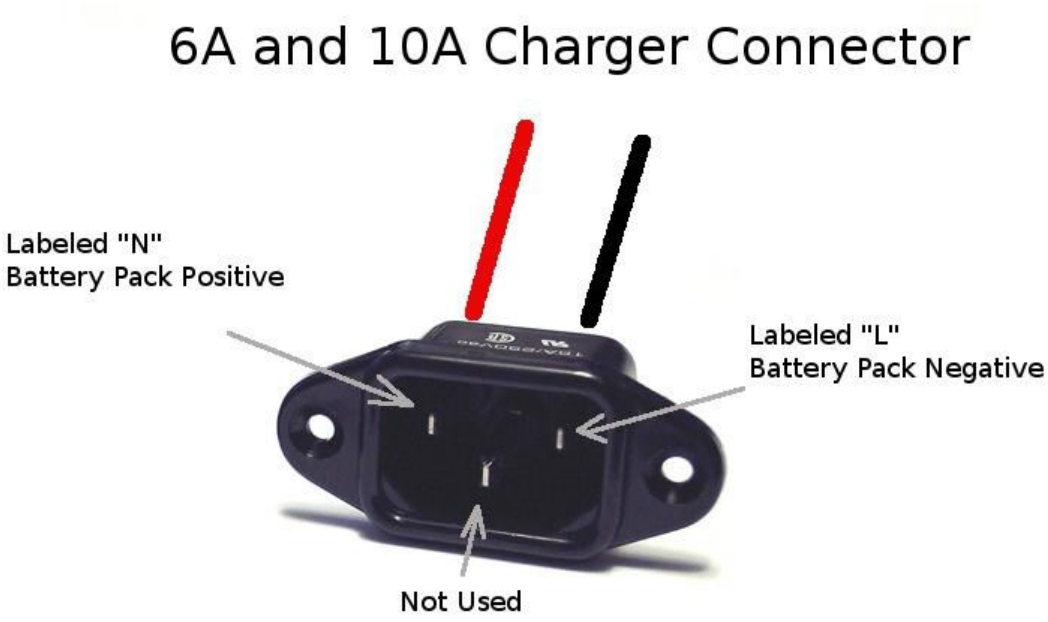
Temperature less than 83°C – Full charging power
Temperature is 85°C to 95°C – Power reduced to 50%
Temperature is greater than 95°C – No output

4.3 Reverse polarity protection: charger will not turn on if the battery pack is connected backwards (or less than 5V).

5. Connections

5.1 IEC Connector

The CH-LF48V6-TSL charger comes with an IEC type connector for the output. The connections to the battery pack are made as follows:



6. Cautions

● Make sure charger voltage output matches to the number of cells in the battery pack.
● Make sure positive output of the chargers is connected to a positive connection to the battery pack, and the negative output of the charger is connected to a negative connection of the battery pack.
● After a complete charging, disconnect the power source from the charger and then disconnect the connection between the charger and the battery pack.

7. Troubleshooting

● The charger must be installed in a cool well-ventilated area which is free of dust
● If the charger is not charging unplug the charger from the AC line and battery pack, then check for poor connections, short circuits, over heating conditions as well as alarm status from the Energy Management System.
● If charger does not display any LED's when plugged in and charging does not occur the fuse may be blow. Unplug the charger from the battery pack and AC line and check the fuse by unscrewing the cap with a #2 Philips screw driver. If the fuse is blown replace with an equivalent size fuse of the same voltage and amperage rating.
● If the charger finishes charging too early make sure that the connection from the charge to the battery pack is good and does not have high resistance.