

CX2 Level 3 Lithium Ion Smart Charger

Description

The CX2 is a level 3 SMBUS Rev. 1.1 compliant smart charger system. It interrogates the battery packs SMBUS Rev.1.1. Fuel Gauge for Constant Voltage (CV) and Charge Current (CC) settings and applies the charge accordingly. Taper Current termination at C/25 where “C” is the capacity of the pack, for example a pack of 3000mAH will terminate at 120mA. There is a backup timer.

The display will show the Design Capacity, Full Charge Capacity (FCC), time to run, and battery pack temperature. The data is demanded from the battery pack fuel gauge.

The battery icon will also display a dynamic fill with % going from red to(20%) to orange(40%) to green (up to 100%) with numerical notification on the icon. Temperature is displayed by a filling thermometer with numerical notification on the bulb. The smart charger is not designed to inhibit charging outside of any given temperature range, that is the function of the battery pack fuel gauge controller.

A visual graphic representation of both CV and CC is provided; it is dynamically scalable according to the time to run at the point of commencing charge. Removing the battery pack and re-inserting will reset this scale (must allow charger to reset to waiting before re-insert). Charger status “waiting or running” is displayed. At the end of a charge cycle if the FCC is less than 80% of Design Capacity the display will show “worn out battery” with red background. Charging is not inhibited.

The CX2 is housed in a custom ABS flame retardant case accommodating the 60W universal ac input supply with space temperature controlled fan, charge controller and microprocessor/ display controller. Connectivity is provided by an industry standard 5 way pluggable connector supplied with the charger system, the interface lead should be kept short.

To operate connect to ac supply, when “waiting” displayed connect the battery and the charger will automatically begin operation.



AC supply: 50/60 Hz, 90Vac-250Vac

AC supply input power: 90W

CV accuracy: < 1%, maximum 18V

CC accuracy: <8%, Maximum 3.5A

Taper current: nominal C/25

Comms: SMBUS rev 1.1

Size: 150 x 140 x 50mm

Weight: 410g