

THERMAL MANAGEMENT SYSTEM FOR HIGH POWER ELECTRICAL EQUIPMENT

Abstract

A thermal management system for high power electrical equipment includes temperature adjustment means, sensing means, and a microcontroller. The temperature adjustment means includes small and large temperature adjustment units and a selection device, wherein the small and large temperature adjustment units are thermally connected to the battery cells and the battery enclosure, respectively. The sensing means includes temperature sensors for measuring the temperatures of the battery cells, and capacity sensors for measuring the remaining capacities of the battery cells available for the electrical equipment, wherein the temperature and capacity sensors can output corresponding signals. The microcontroller receives the signals from the temperature and capacity sensors, and enables or disables the temperature adjustment means according to the temperature signals. Next, the microcontroller operates the selection device to start the small temperature adjustment unit and/or the large temperature adjustment unit according to the capacity signals when the temperature adjustment means is enabled.

(FIG.2)