ContainerPower Energy Solutions

Pack battery current limiting

Overview

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I need to charge 12V car battery (from main battery), but I have to limit current, because power cables are quite thin and I don't want to draw too much power from main system (in case battery is empty). What would be simplest solution (without ineffective linear regulators)?

I though about PWM.

Edit: The output voltage to the load should be 12V constant. This sounds like an XY problem - why do you think your load would pull more than 1A if it's given an appropriate voltage in the first place?

Also, you can't control the voltage and the current applied to the load - you pick one, the load.

While many BMS units simply provide an on/off switch to allow and prohibit discharge and charge currents, the Orion BMS carefully calculates the actual maximum amperage limits such that it prevents the application from drawing the battery voltage above or below the voltage limits. Other BMS systems.

There are a number of reasons to estimate the charge and discharge current limits of a battery pack in real time: Hence this is a key function of the Battery Management System (BMS). The difficulty is that the current limits are dependent on a number of factors, for the cell alone we should.

I am using 16 LFP batteries, each with a capacity of 100Ah and a voltage of 3.2V, to create a battery pack with a total voltage of 51.2V and a capacity of 5kWh. Based on the high-side MOSFET design, could I use the TIDA-010208

reference design?

Additionally, could you recommend a current limiter.

The Battery Discharging Current Limit block calculates the maximum discharging current of a battery. Limiting the charging and discharging currents is an important consideration when you model battery packs. This block supports single-precision and double-precision floating-point simulation. To.

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