Discharge rate of power battery cabinet

Overview

How long can a battery be discharged?

Maximum 30-sec Discharge Pulse Current –The maximum current at which the battery can be discharged for pulses of up to 30 seconds. This limit is usually defined by the battery manufacturer in order to prevent excessive discharge rates that would damage the battery or reduce its capacity.

What is a 5c charge rate?

For a battery with a capacity of 100 Amp-hrs, this equates to a discharge current of 100 Amps. A 5C rate for this battery would be 500 Amps, and a C/2 rate would be 50 Amps. Similarly, an E-rate describes the discharge power. A 1E rate is the discharge power to discharge the entire battery in 1 hour.

What is a 1C charge rate?

A 1C rate means that the discharge current will discharge the entire battery in 1 hour. For a battery with a capacity of 100 Amp-hrs, this equates to a discharge current of 100 Amps. A 5C rate for this battery would be 500 Amps, and a C/2 rate would be 50 Amps. Similarly, an E-rate describes the discharge power.

What is a C-rate in a battery?

C- and E- rates – In describing batteries, discharge current is often expressed as a C-rate in order to normalize against battery capacity, which is often very different between batteries. A C-rate is a measure of the rate at which a battery is discharged relative to its maximum capacity.

How do you calculate discharge capacity?

Capacity is calculated by multiplying the discharge current (in Amps) by the discharge time (in hours) and decreases with increasing C-rate.

What does energy mean in a battery?

Energy or Nominal Energy (Wh (for a specific C-rate)) – The "energy capacity" of the battery, the total Watt-hours available when the battery is discharged at a certain discharge current (specified as a C-rate) from 100 percent state-of-charge to the cut-off voltage.

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