Will a large battery discharge current burn the motor

Does a car battery dip a lot?
Yes,the voltage dipswhen a motor,such as a starter motor,draws more amps than the car battery can provide. However,this doesn't cause damage to the battery.

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.

Can a smart battery run a motor without a fuses?
If it is a smart batteryand the motor draws more amps than it can provide,some sort of overcurrent protection might kick in and the motor will not run. If it's a plain chemical battery with no fuses or BMS,the 20 amps figure likely is the battery's rated current.

What happens if you use an undersized battery?
Using a battery that is too small for the motor increases the chance that the battery may fail to supply the starting current,causing the motor (and any attached load) to not turn. This is similar to how a car may not start due to a weak battery.

Can a car battery get damaged?
Whether a battery gets damaged depends on several factors,primarily the heat generated in the motor and the battery. A motor drawing more amps than a battery can provide can generate excessive heat in the motor,which could potentially damage it. Vehicle batteries are rated for this situation. Other batteries may not be,which is why they have a short term max discharge rating (aka "CCA" cold cranking amps) and a continuous discharge rating.

What happens when a Li-ion battery is depleted?
When a Li-ion battery is depleted it undergoes a chemical process that ruins the batterybelow certain voltages. This is not related to the motor. However,if a motor draws more amps than a Li-ion battery can provide,the motor windings may get so hot that their insulation melts or the windings break open.

magnitude of discharge currents increase, the accuracy of the resistance and short circuit current values increase. In IEC896-2 "Stationary Lead-Acid Batteries, Part 2: Valve Regulated Types", the estimated short circuit current is obtained by discharging a battery at 4 times and 20 times its rated 10 hour discharge current (I10 at 25

Both scenarios are potentially hazardous. In the first case, the internal resistance in the battery will probably

reduce the current sufficiently to prevent damage to the motor, but the battery may be damaged. In the second case, the internal battery resistance will not reduce the motor current sufficiently tp prevent damage to the motor.

But for example if a circuit designed for 12 volts having a resistance or 360 ohms and an expected current draw of 0.033 amps then it makes no difference if you use a little duracel 12v type 21/23 battery, your car battery; the limiting factor for battery discharge would be the circuit resistance and not the battery"s physical capability, chemistry, and electrical capacity.

A larger battery can supply more current over time, which is essential for starting engines with higher demands. Starter motors often require a significant burst of ...

If the motors draws 2.2A stall, the battery protection circuitry of 5A limit gives plenty of overhead. I would not be concerned about using a motor with that kind of safety margin. As to what happens when you exceed 5A, That ...

Battery current. The higher the C-rate, the higher the maximum current it can discharge. The battery discharge current should not exceed the current upper limit supported by the motor. Because the continuous high ...

Standard discharge current is related with nominal/rated battery capacity (for example 2500mAh), and cycle count. If the battery is discharged with a higher current, the ...

For example, a battery with a maximum discharge current of 10 amps can provide twice as much power as a battery with a maximum discharge current of 5 amps. This number is important for two reasons. First, if you are ...

The way I now understand it is the C rating and the amp discharge rate would NOT destroy the motor, meaning I can have a battery discharge at 100A and neither my motors nor my ESCs will be affected badly. ... Exceeding their limits could soon the burn out motor, the ESC, or the battery. Even running the system at slightly above the maximum ...

Lead acid batteries are fantastic at providing a lot of power for a short period of time. In the automotive world, this is referred to as Cold Cranking Amps om GNB Systems FAQ page (found via a Google search):. Cranking amps are the numbers of amperes a lead-acid battery at 32 degrees F (0 degrees C) can deliver for 30 seconds and maintain at least 1.2 ...

A motor drive usually has a current limit circuit to prevent over current during stall conditions. So if you have a small motor and you run it from a car battery you could blow it up ...

What does discharge current mean. The current flowing through the circuit in the discharge process is called

the discharge current. For instance, the 1C rate means the entire ...

This is obviously due to the battery running down. This condition can have a devastating effect on the starter motor. The impact of low-battery voltage and prolonged ...

Drastically reduced battery capacity at cold temperature. Expect half the range at -20c compared to optimal conditions 20c Reduced discharge capacity of cold temperature. Can"t charge a very cold battery at all until it warms up. So you would need to buy a battery that can take you 115km on a single charge, at 25 kmh, under perfect conditions.

maximum capacity. 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.

(this values change beacuse 52V battery operates from 58,8V down to 37,8V, but 13A is average discharge current) Example, if you have a 26Ah battery, using a 4ohm resistor, it will theorical full discharge battery in 2hours. (13Ax2hours equals 26Ah) But if U just want to discharge a battery from 100% SOC to 50%SOC, just discharge durin aprox ...

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