Sudden Battery Drops (FAQ)

Why Does Your Battery Suddenly Drop to 0%?

If your golf cart battery suddenly drops to 0% while driving, please rest assured—this is likely not a hardware failure. Instead, it is typically an SOC display deviation caused by parasitic draw, a common technical challenge across the lithium battery industry.

Ⅰ. The Cause: "Silent" Power Drain

Through simulated testing and customer data, we found that even when a golf cart is turned off and idle, the vehicle’ s electrical system continues to draw a tiny amount of current.

For a 48V 100Ah lithium battery, this can result in a "silent" drain of approximately 2% per day (actual consumption varies by vehicle model). As long as the battery remains connected to the vehicle without the switch being turned off, it is continuously discharging.

Most SOC displays use the Coulomb Counting principle to estimate remaining power: Current SOC = Initial Charge + Energy In − Energy Out.

Because the vehicle's standby current is so small, the BMS may not detect this micro-consumption. Over time, the actual SOC decreases while the display remains unchanged. If the SOC is not recalibrated, the deviation accumulates until the display might show 50% when the actual capacity is near 10%.

Ⅱ. The Solution: Best Practices for Accuracy

1. **Initial Calibration**

   Upon receiving the battery, please perform a full charge to complete the initial SOCcalibration by either continuing to charge for approximately 30 minutes after the charger indicates a full charge, or by stopping the charge once the DC HOUSE App notifies you that Over-Voltage Protection (OVP) has been triggered.

2. **Timely Charging**

   To ensure you have sufficient power for your journey, please charge the battery promptly when the power level drops below 30%.

3. **Regular Full Charge**

   It is recommended to fully charge the battery once every 3–5 days (using the same method as the initial use). This helps perform regular SOC calibration to eliminate cumulative deviations.

4. **Long-Term Storage**

   If your golf cart will be idle for more than 10 days, please follow these steps:

   - **Capacity Management**
     Store the battery with a charge level between 50%–60%.
   - **Cut the Power**
     Turn off the battery switch. If your model does not have a switch, disconnect the battery from the load or install a "Battery Disconnect Switch" to prevent parasitic drain from the golf cart's electrical system.
   - **Routine Maintenance**
     Check the power level every 3 months. If the charge drops below 50%–60%, please recharge according to the following guidelines:
     - ✧ **For Batteries Stored Above 0°C (32°F):** Recharge the battery to 50%–60% before returning it to storage.
     - ✧ **For Batteries Stored Below 0°C (32°F):** Allow the battery to acclimatize at ambient temperature for at least 6 hours. Ensure the internal temperature has risen above 0°C before recharging in an ambient temperature environment.

     WARNING: DO NOT charge the battery while it is still below 0°C. Charging a frozen battery can cause irreversible performance damage or safety hazards.
   - **Returning to Use After Storage**
     Before resuming operation, inspect the terminals and the exterior for any signs of damage. Once verified, perform a full charge (using the same method as the Initial Use) to restore the battery to normal service.
   - **Storage Environment Recommendations**
     To ensure electrochemical stability and maximize cycle life, we recommend maintaining an ambient temperature between -10°C and 40°C (14°F – 104°F) for storage exceeding 30 days.
     Note: Cold-resistance thresholds vary by model. For the specific parameters of your battery unit, please contact the DC HOUSE customer service team for guidance.

Ⅲ. Friendly Reminder

Please note that these steps are not intended to repair a fault but are designed to help the BMS more accurately recognize the true capacity of the battery. By developing good charging habits, you can effectively prevent display deviations and ensure your trips remain worry-free.
For more detailed guidance, please refer to the *DC HOUSE Golf Cart Battery UserGuide.*