**Why sometimes the SoC will not achieve 100% or 0% at the end of Charging and Discharging**

### C****harging****

BMS will send a command "**charge disable**" to the inverter even though the charge current limitation is not zero when the battery reaches warning voltage which is lower than the alarm voltage. If the inverter doesn't execute this command sent by BMS, the battery keeps being charged until reaching the alarm voltage (high voltage). Then the charge MOS on BMS disconnects and the SoC of battery turns to be 100%SOC. If the inverter executes “charge disable” command, the battery will stop charging and the battery SoC stays at a value which is lower than 100%.

### D****ischarging****

The strategy is similar. BMS will send a "**force charge"** command to the inverter when battery discharges to 10% SoC. If no grid power input or the inverter doesn't execute “force charge” command, the battery discharges to the warning voltage and BMS sends a **discharge disable** command to the inverter. If the inverter doesn't execute it either, the battery keeps discharging until reaching the alarm voltage (low voltage). Then the discharge MOS disconnects and battery stops discharging. Meanwhile, the SoC of battery turns to be 0%SOC. If the inverter executes “discharge disable” command, the battery will stop discharging and the battery SoC stays at a value which is a little higher than 0%.