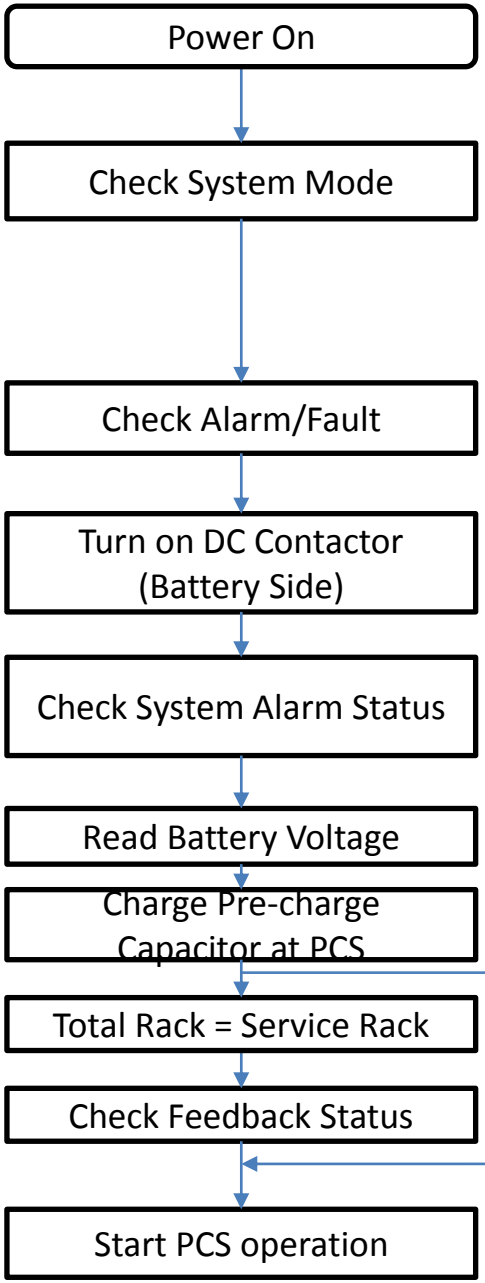
Start-up Sequence

9th May. 2018



삼성SDI SAMSUNG | ESS Development Group

Start-Up Sequence



1. Power on(all Rack BMS & System BMS)
2. Wait 40sec for initialize rack information.
3. Check All Rack information.
4. Next Step

Off-line	When all the DC switches are in the OPEN state, If a fault occurs due to exceeding the minimum number of operable racks set in the system, this bit set.(Priority 3)
Idle	If the system can be operated by partial operation but the DC switch is all OPEN (Priority 2)
Ready	When more than one DC switch is CLOSE. (Priority 1)

Off-line : Don't Move next Step & check System
Idle : Next Step.
Ready : DC Contactor All Open then next step

When there is no alarm and fault, allow to move next step.
Otherwise, please check the battery system carefully.
If there is any alarm or fault, system stop and check out system.
If there is any fault, but you want to use, only you can use temporary.

Use DC Contactor All Close (Battery Side)

System Stop	Available rack count is less than recommanded rack count.(When Partial Operation is available)
Rack Voltage Imbalance Alarm	Not connected more than one rack with pcs.(When Partial Operation is available)

System Stop : Don't Move next Step, DC Contactor All Open
Rack Voltage Imbalance Alarm : please check the battery system carefully, then next step
None : Next Step

Read Service Rack Voltage(Connected)

Please Compare with PCS Target Voltage and Battery Side(Service Voltage) **±5V**

Check Protocol

Total Rack ≠ Service Rack → Fuse On / DC Contactor On → Check Feedback Status

Fuse On / DC Contactor On

If Avg. Rack Voltage > Dis-engagement Rack Voltage
Then System Discharge (Until all engagement Rack)
Else If Avg. Rack Voltage < Dis-engagement Rack Voltage
Then System Charge (Until all engagement Rack)

1. PCS DC Contactor Close.
2. Etc.