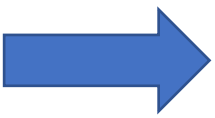
COMMUNICATION SETTINGS FOR GREENRICH BATTERY

For communication with battery BMS, Greenrich battery have 2 communication ports RS485 and CAN. For RS485 port use pin # 7 & 8 on RJ-45 plug (7 – RS485A, 8 – RS485B) and for CAN port use pin # 4 & 5 on RJ-45 plug (Pin 4 – CAN H & Pin 5 – CAN L).

For dip switch settings, when using one battery set the dip switch to 1-0-0-0 and when using two or more batteries, please refer to battery manual for dip switch configuration.

1. COMMUNICATION WITH GROWATT SPF 3000 TL HVM 48



I. **Connect the battery terminals securely from your batteries to the inverter. Positive (+) from your battery to positive (+) terminal on your inverter, negative (-) from your battery to negative terminal (-) on your inverter.**

II. **If you are using 2 or more batteries connect the positive (+) of the first battery to the positive (+) of the next battery, similarly, connect the negative (-) of the first battery to the negative (-) of the second battery. When connecting your battery to the inverter connect your red (+) cable to the positive terminal of the first battery and your black (-) cable to the negative terminal of your last battery. Remember to connect the communication cable between your batteries.**

For communication between inverter and battery BMS see below cable configuration.

Use pin # 1 & 2 on the inverter RJ-45 PLUG.

PIN # (inverter)	PIN # (Battery)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

III. **Connect the RS485 cable from the battery (RS485 port next to CAN PORT) to the inverters BMS port.**

LCD SETTING ON THE INVERTER

- **First turn on the battery and do all settings on the inverter BEFORE switching on AC INPUT and PV INPUT .**

- **On the inverter press and hold the ENTER button until a 2-digit number on the right starts flashing. Once flashing use the UP or DOWN arrows to go through the settings. For battery set up go to setting 05.**

- **Set the battery type as "Li" in setting 05. After selecting LI press ENTER button and You will be directed to setting 036 which you will be required to input the communication protocol. Enter protocol 02 then press ESC to go back to the main screen.**

- **To verify that your inverter is communicating with your battery on your inverter settings option # 12,13 and 21 will be displaying percentage values .**

2. COMUNICATION WITH LUX POWER INVERTER (SNA 5000 WPV)

- **Connect the battery terminals securely from your batteries to the inverter. Positive (+) from your battery to positive (+) terminal on your inverter, negative (-) from your battery to negative terminal (-) on your inverter.**

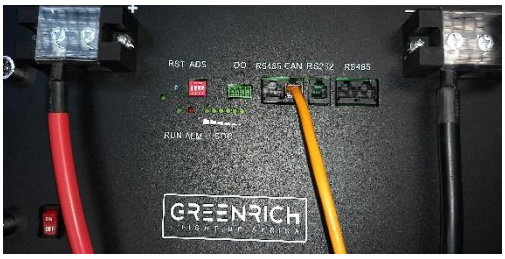
- **If you are using 2 or more batteries connect the positive (+) of the first battery to the positive (+) of the next battery, similarly, connect the negative (-) of the first battery to the negative (-) of the second battery. When connecting your battery to the inverter connect your red (+) cable to the positive terminal of the first battery and your black (-) cable to the negative terminal of your last battery. Remember to connect the communication cable between your batteries.**

For communication between inverter and battery BMS see below cable configuration.

1. **For CAN communication use pin 3 and 4**

PIN # (Inverter)	PIN # (Battery)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

- **Connect the communication cable on the CAN PORT on the battery (CAN port next to RS485 PORT) to the inverters CAN/RS485 port.**



LCD SETTING ON THE INVERTER

- **First turn on the battery and do all settings on the inverter BEFORE switching on AC INPUT and PV INPUT .**

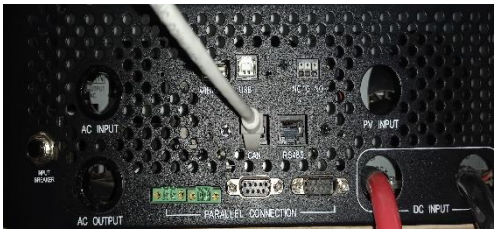
- **On the inverter press and hold the ENTER button until a 2-digit number on the bottom left starts flashing. Once flashing use the UP or DOWN arrows to go through the settings. For battery set up go to setting 03.**

- **Set the battery type as "Li" in setting 03. After selecting LI press ENTER button and You will be directed to battery brand setting which you will be required to input the communication protocol. Enter protocol 2 then press ENTER your inverter will switch OFF and back ON.**

- **To verify that your inverter is communicating with your battery, on your inverter the battery icon will fill up according to the battery SOC.**

3. **<u>COMMUNICATION WITH GROWATT(SPF 5000 ES , SPF 5000TL HVM - P , SPF 5000TL HVM WPV – P)</u>**

- **Connect the battery terminals securely from your batteries to the inverter. Positive (+) from your battery to positive (+) terminal on your inverter, negative (-) from your battery to negative terminal (-) on your inverter.**



- **If you are using 2 or more batteries connect the positive (+) of the first battery to the positive (+) of the next battery, similarly, connect the negative (-) of the first battery to the negative (-) of the second battery. When connecting your battery to the inverter connect your red (+) cable to the positive terminal of the first battery and your black (-) cable to the negative terminal of your last battery. Remember to connect the communication cable between your batteries.**

For communication between inverter and battery BMS see below communication cable configuration.

3.1 Use pin 1 & 2 for RS485 on inverter.

PIN # (Battery)	PIN # (Inverter)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

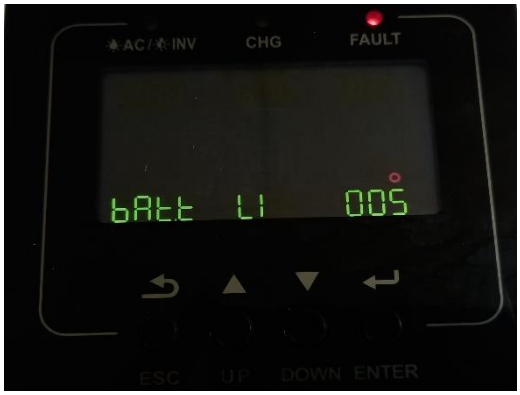
Connect the communication cable on the RS485 PORT on the battery (next to CAN port) to the inverters BMS/RS485 port

LCD SETTING ON THE INVERTER

- **First turn on the battery and do all settings on the inverter BEFORE switching on AC INPUT and PV INPUT .**

- **On the inverter press and hold the ENTER button until a 2-digit number on the right starts flashing. Once flashing use the UP or DOWN arrows to go through the settings. For battery set up go to setting 05.**

- **Set the battery type as “Li” in setting 05. After selecting LI press ENTER button and You will be directed to setting 036 which you will be required to input the communication protocol. Enter protocol 02 then press ESC to go back to the main screen.**



- **To verify that your inverter is communicating with your battery on your inverter settings option # 12,13 and 21 will be displaying percentage values .**

3.2 Use pin 4 & 5 for CAN on inverter

PIN # (Inverter)	PIN # (Battery)
1	1
2	2
3	3
4 →	4
5 →	5
6	6
7	7
8	8

- **Connect the communication cable on the CAN PORT on the battery to the inverters BMS/CAN port.**

LCD SETTING ON THE INVERTER

- **First turn on the battery and do all settings on the inverter BEFORE switching on AC INPUT and PV INPUT .**

- **On the inverter press and hold the ENTER button until a 2-digit number on the right starts flashing. Once flashing use the UP or DOWN arrows to go through the settings. For battery set up go to setting 05.**

- **Set the battery type as “Li” in setting 05. After selecting LI press ENTER button and You will be directed to setting 036 which you will be required to input the communication protocol. Enter protocol 52 then press ENTER until you see 036 flashing, u can then press ESC to go back to the main screen.**

- **To verify that your inverter is communicating with your battery on your inverter settings option # 12,13 and 21 will be displaying percentage values .**

4 .COMMUNICATION WITH DEYE INVERTER (5KW, 8KW & 12KW)

- **Connect the battery terminals securely from your batteries to the inverter. Positive (+) from your battery to positive (+) terminal on your inverter, negative (-) from your battery to negative terminal (-) on your inverter.**

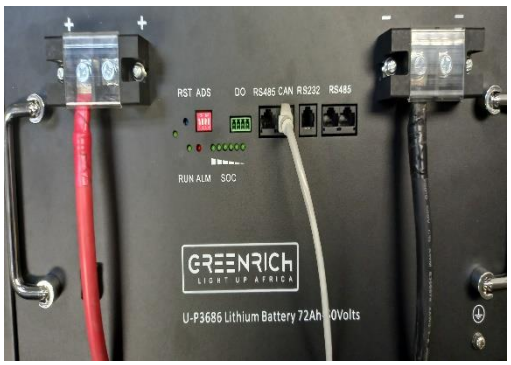
- **If you are using 2 or more batteries connect the positive (+) of the first battery to the positive (+) of the next battery, similarly, connect the negative (-) of the first battery to the negative (-) of the second battery. When connecting your battery to the inverter connect your red (+) cable to the positive terminal of the first battery and your black (-) cable to the negative terminal of your last battery. Remember to connect the communication cable between your batteries.**

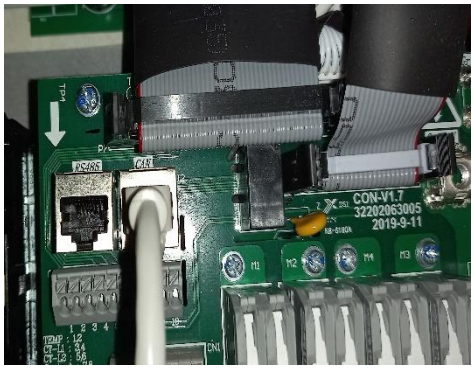
For communication between inverter and battery BMS see below communication cable configuration.

- **For communication using CAN Port use NORMAL RJ45 cable with normal pin – pin connections.**

PIN # (Inverter)	PIN # (Battery)
1	1
2	2
3	3
4 →	4
5 →	5
6	6
7	7
8	8

Connect the communication cable on the CAN PORT on the battery (next to RS 485 port) to the inverters CAN port.

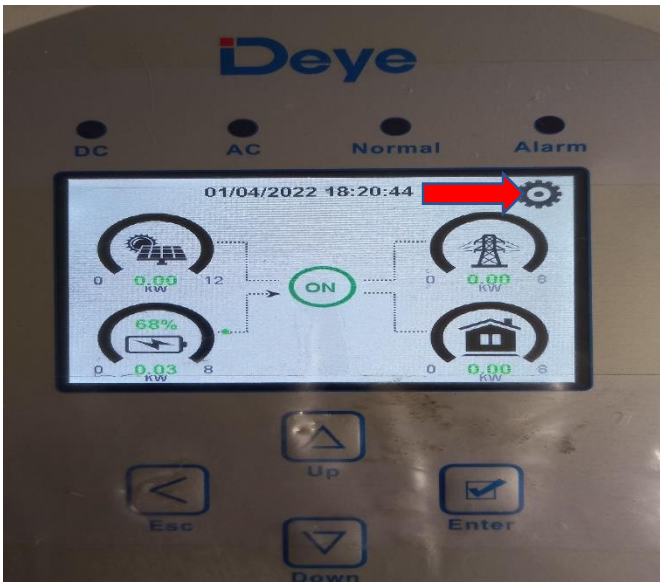




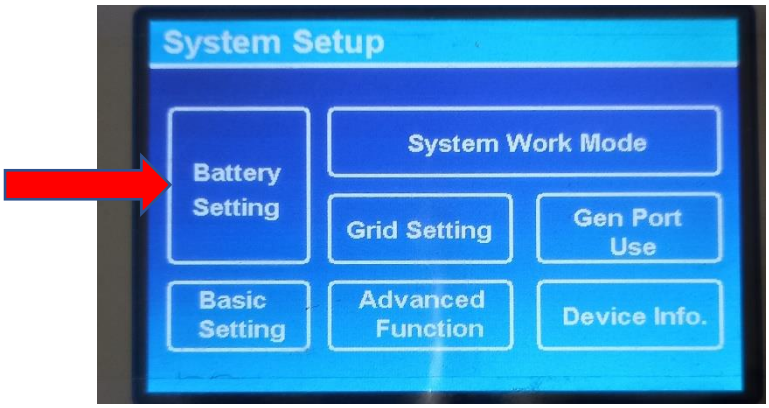
LCD SETTINGS ON THE INVERTER

- **First turn on the battery and do all settings on the inverter before switching on AC INPUT and PV INPUT .**

- **On your main screen CLICK the settings icon on the RIGHT top corner.**



- **Click battery setting**



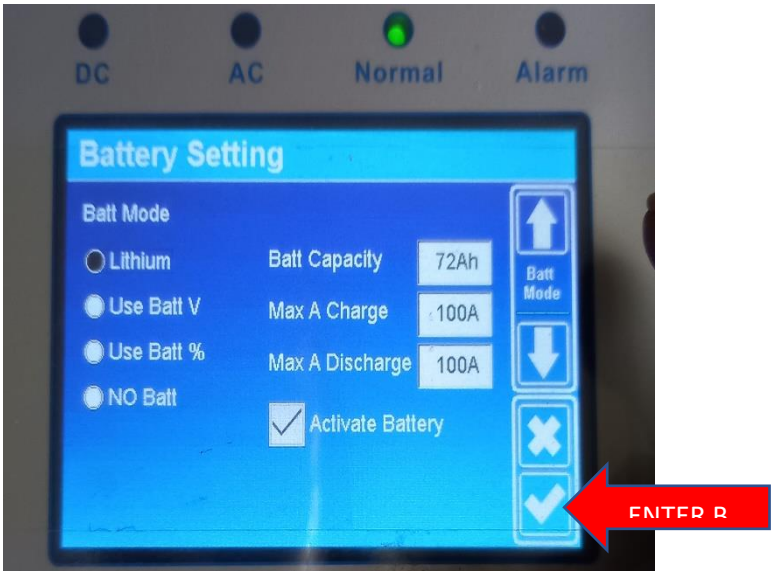
- **Select lithium and then enter battery parameters (Use the down and up arrows to change these values). When inputting these values use the down and up keys on the inverter(hard keys).**

- **i. battery capacity – 72ah**

  ii. maximum charging current – 100A

  iii. maximum discharge current – 100A

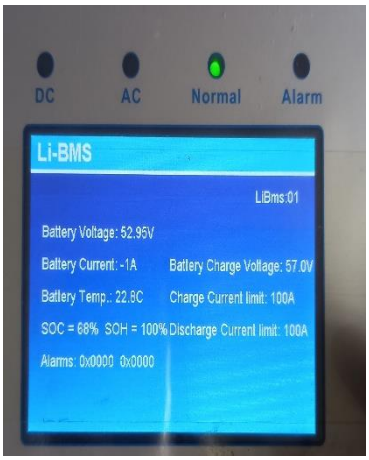
NB: AFTER INPUTING THE ABOVE VALUES YOU MUST PRESS ENTER ON YOUR INVERTER SCREEN TO SAVE YOUR SETTINGS, IF YOU EXIT THE SCREEN WITHOUT PRESSING THE ENTER ICON YOUR INVERTER WILL NOT SAVE YOUR SETTINGS.



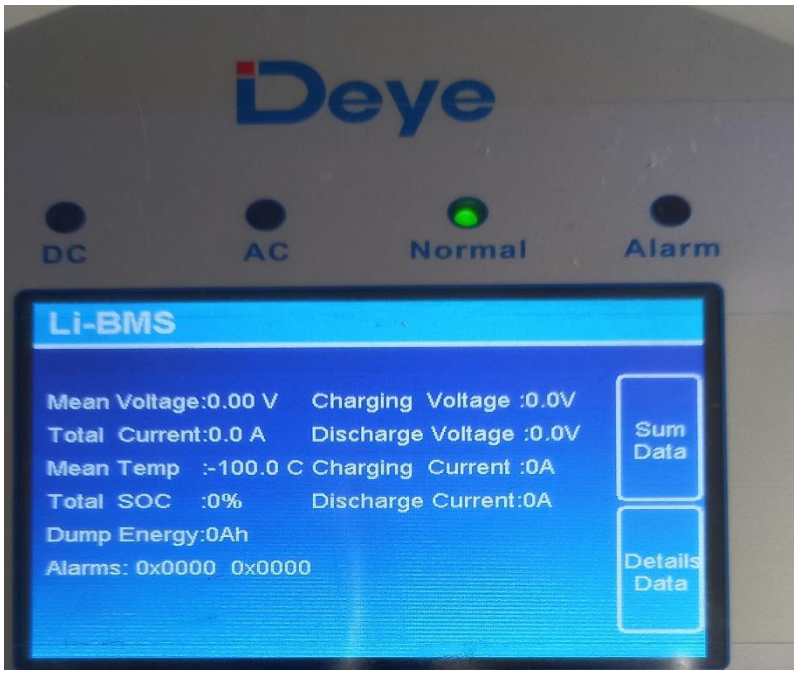
NB: When using 2 or more batteries you need to MULTIPLY the above values with the number of batteries you are connecting.

- **After entering the above battery parameters press ENTER and ESC to the main screen.**

- **To verify that there is communication between inverter and the battery CLICK the battery ICON on the main screen and click LI BMS on the bottom right corner, if there is communication you should be able to see battery information/ parameters.**



NB: When verifying if your battery is communicating with the inverter and you don't see the battery parameters AS SHOWN IN THE PICTURE BELOW , you MUST RE DO the settings.



5. COMMUNICATION WITH SUNSYNK INVERTER (5KW, 8KW ,12KW).

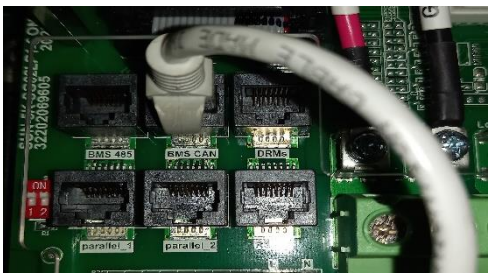
- **Connect the battery terminals securely from your batteries to the inverter. Positive (+) from your battery to positive (+) terminal on your inverter, negative (-) from your battery to negative terminal (-) on your inverter**

- **If you are using 2 or more batteries connect the positive (+) of the first battery to the positive (+) of the next battery, similarly, connect the negative (-) of the first battery to the negative (-) of the second battery. When connecting your battery to the inverter connect your red (+) cable to the positive terminal of the first battery and your black (-) cable to the negative terminal of your last battery. Remember to connect the communication cable between your batteries.**

- **For communication using CAN Port use NORMAL RJ45 cable with normal pin – pin connections.**

PIN # (Inverter)	PIN # (Battery)
1	1
2	2
3	3
4 →	4
5 →	5
6	6
7	7
8	8

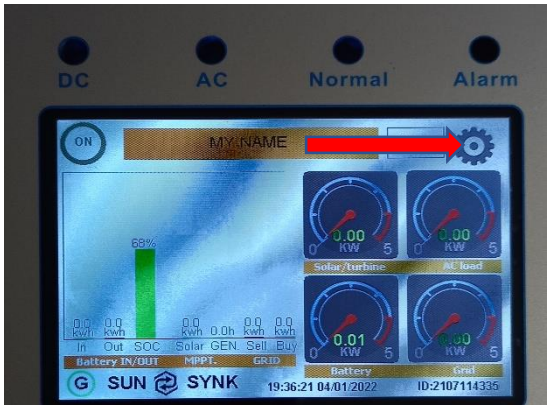
Connect the communication cable on the CAN PORT on the battery (next to RS 485 port) to the inverters BMS CAN port.



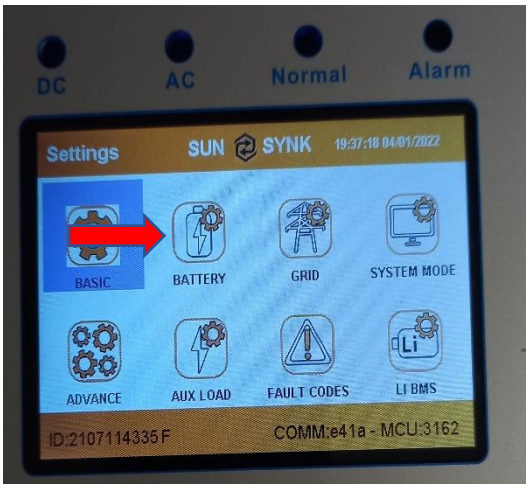
LCD SETTINGS ON THE INVERTER

- **First turn on the battery and do all settings on the inverter BEFORE switching on AC INPUT and PV INPUT .**

- **On your main screen CLICK the settings icon on the RIGHT top Corner**



- **Click battery setting**

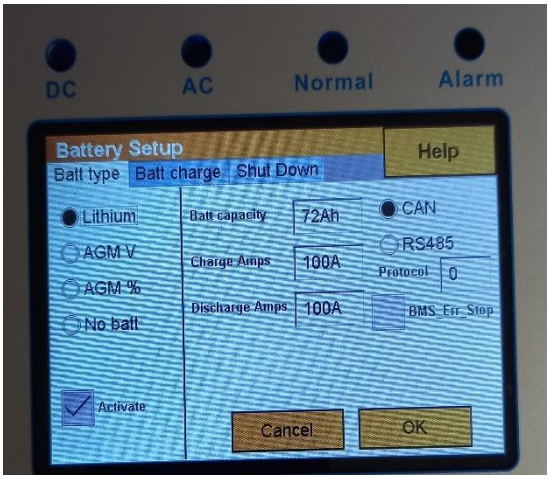


- **Select battery type to lithium and then enter battery parameters. When inputting these values uses the down and up keys on the inverter(hard keys).**

i. battery capacity – 72ah

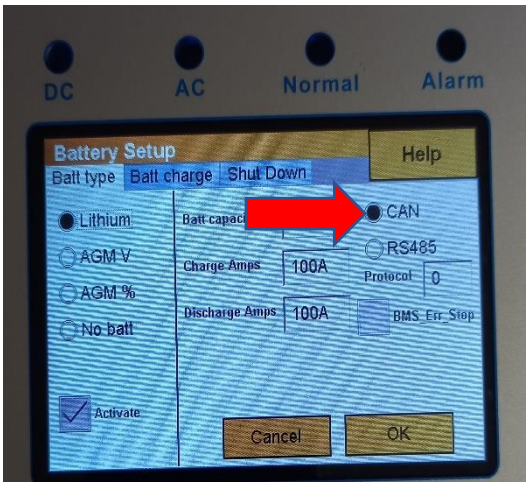
ii. maximum charging current – 100A

iii. maximum discharge current – 100A

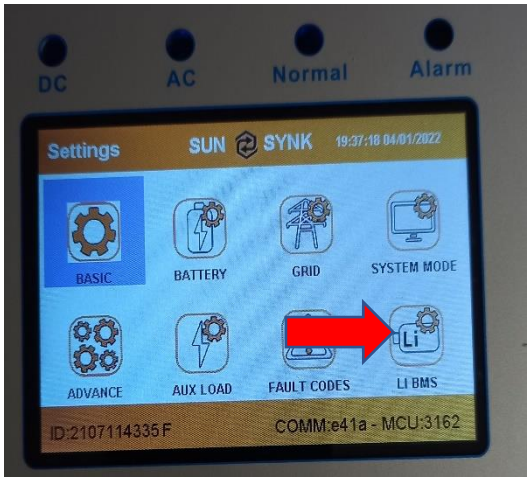


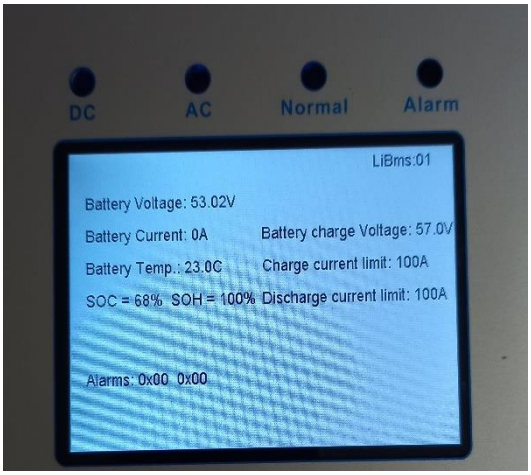
NB: When using 2 or more batteries you need to MULTIPLY the above values with the number of batteries you are connecting.

- **When using CAN PORT (both on battery and inverter) please select CAN.**



- **After entering the above battery parameters press OK and ESC to the main screen.**
- **To verify that there is communication between inverter and the battery CLICK setting icon on the top right corner and click LI - BMS icon, if there is communication you should be able to see the battery information/ parameters.**


DC
AC
Normal
Alarm
Settings
SUN SYNK
19:37:18 04/01/2022
BASIC
BATTERY
GRID
SYSTEM MODE
ADVANCE
AUX LOAD
FAULT CODES
LI BMS
ID:2107114335F
COMM:e41a - MCU:3162


DC
AC
Normal
Alarm
LiBms:01
Battery Voltage: 53.02V
Battery Current: 0A
Battery charge Voltage: 57.0V
Battery Temp.: 23.0C
Charge current limit: 100A
SOC = 68% SOH = 100%
Discharge current limit: 100A
Alarms: 0x00 0x00

THE END