Dyness DL5.0C battery and Victron Multiplus 48/5000/70 Setup

Check List:

All of DYNESS battery has same DIP settings and cable connections,here are examples of DL5.0C;

Power cables;

Parallel cables;

Communication cable between battery and inverter;

Communication cables between battery and battery;

DL5.0C*4PCS

Multiplus 48V/3000~5000VA

Note:

Before starting, make sure battery and inverter size matched.

Follow Dyness user manual to check details, it is recommended to use battery in 1: 2 configuration at least.

Applicable Product type:

Dyness Battery Low Voltage Product:

48V series: A48100 etc(Except B4850, B3).

All 51V series: B51100,BX51100,DL3.6,DL5.0,DL5.0C, DL5.0X,PowerDepot H5B,PowerBox Pro etc.

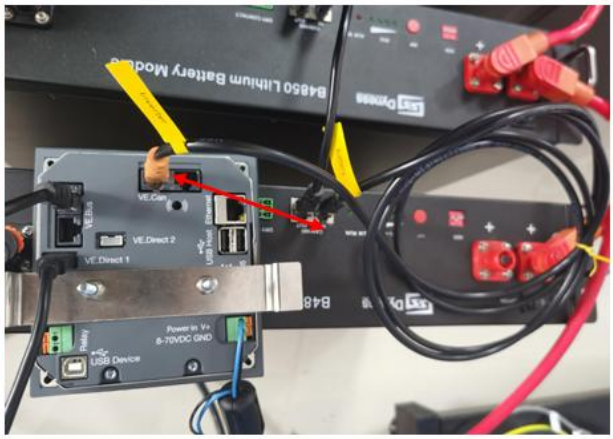
Inverter Type:

Multiplus 48V/3000~5000VA

Step 1:Cable connect in inverter

Refer to user manual to connect energy grid, load, PV etc to Inverter Multiplus 48/5000/70.

Connect the Inverter-CCGX comm cable to VE.BUS port,the Bat-CCGX comm cable to VE.CAN port,the MPPT comm cable to VE direct port.



Step 2:Connect the battery cable to the inverter

Before connecting the battery, please carefully read the user manual of the battery and perform the installation exactly as the battery manufacturer requests.

2a.Connect the battery DC power cable to the inverter.

To avoid DC Arc, it’s recommends installing DC switch between batteries and Hybrid Inverter.Ensure the correct polarity of batteries before connecting to the inverter.

2b.Connect the battery communication cable to the BMS of the inverter.

It’s not normal standard pin-pin cable between battery and inverter ,but battery and battery cables is normal.

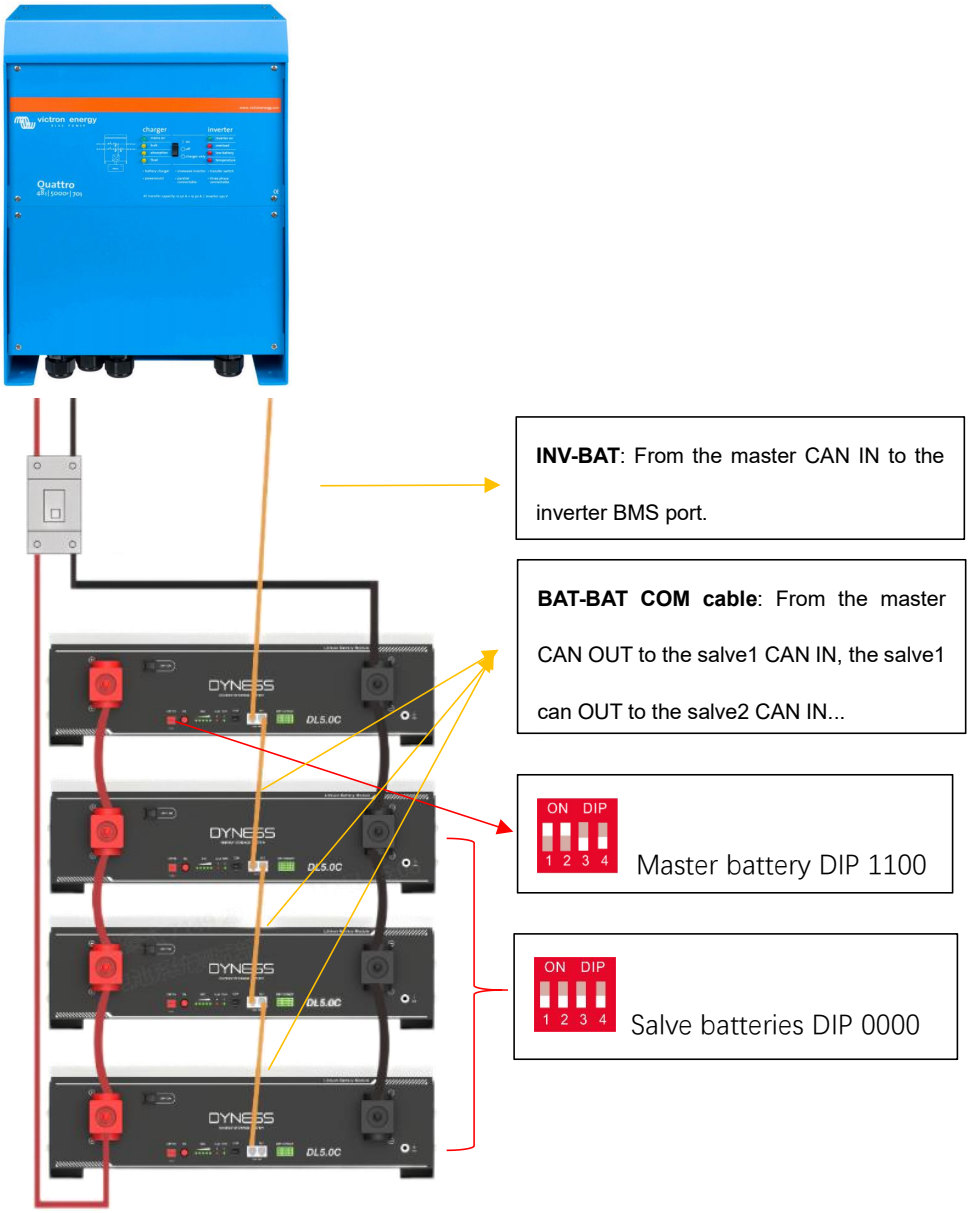
BATTERY-Dyness

INVERTER-VICTRON

Battery （RJ45 IN）			
PIN	Color	Definition	
1	Orange/white	485_A	
2	Orange	XGND	
3	Green/white	485_B	
4	Blue	CANH	
5	Blue/white	CANL	
6	Green	X+5V	
7	Brown/white	XIN	
8	Brown	reserve	

Inverter			
PIN	Color	Definition	
1		NC	
2		NC	
3		NC	
4		NC	
5		NC	
6		NC	
7	Blue	CANH	
8	Blue/white	CANL	

The system diagram is as follows:



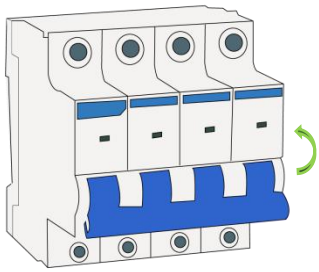
Step 3:Switch on battery and inverter

3a.Turn on battery:

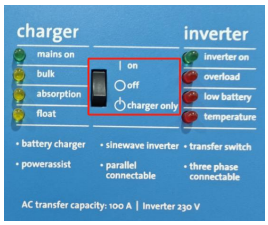
Turn on all the batteries ON/OFF switch,make sure all batteries in the "ON" state.Long press 3s master battery SW to put master battery into the power-on state,you will see master battery's SOC light is constantly on, and the RUN light is flashing.After 3s all slave batteries are awakened by the voltage of the master battery.

3b.Turn on inverter:

Turn on breaker between battery and inverter.



Press ON/OFF button of the inverter to open it.



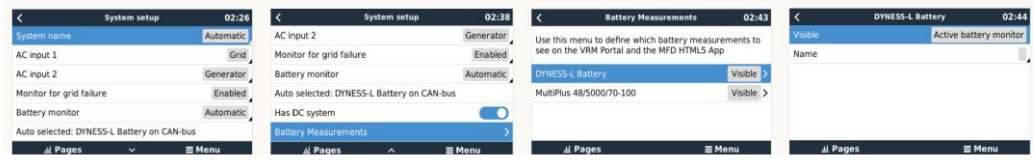
Step 4:Setup inverter

After the inverter is powered on, we can do some setup on the inverter to make the communication

success.

Settings → Services → VE.Can port → CAN-bus BMS(500 kbit/s)

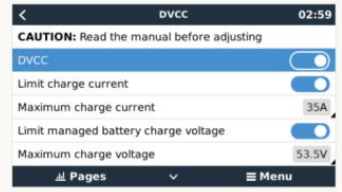
Settings → System setup → Battery monitor:Auto selected:DYNESS-L Battery on CAN-bus
Battery Measurements → DYNESS-L Battery:Visible → Active battery monitor



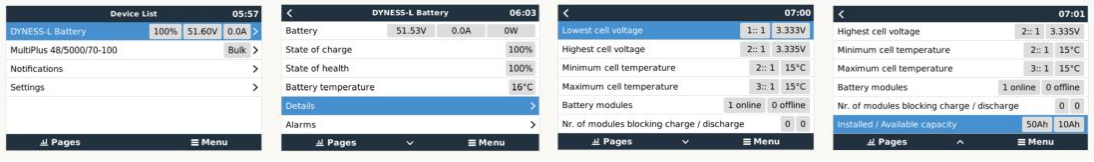
Settings ⟶DVCC:Activate
Limit charge current:OFF ,it will follow BMS
Limit managed battery charge voltage:OFF,it will follow BMS
SVS:OFF
STS:OFF
SCS:OFF

If you turn on the "Limit charge current" ,you can setup a value according to the battery manual ,and the inverter will follow the minimum value between "BMS charge current limit" and "DVCC limit charge current".You can find the BMS charge current limit in "Device list---DYNESS L---Parameters"

If you turn on the "Limit managed battery charge voltage",you can setup a value according to the battery manual,
for **DYNESS 48V model**:B4850,B3,Powerbox F,PowerDepot,VB4850,A48100,BX48100,B48100 and so on,it's recommended **53.5V**
for **DYNESS 51V model**:BX51100,B51100,Powerbox Pro,PowerDepot H5B and so on,it's recommended **56.5V**

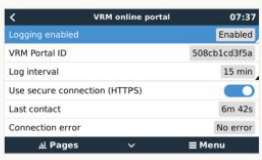


After communication succeed,you can see DYNESS-L Battery program in Device List.
DYNESS-L Battery:Battery present voltage,current,power,SOC,SOH,temperature
DYNESS-L---Details:In the future version(**in testing**) ,you can see battery information below:
Max.cell voltage/temp,
Min.cell voltage/temp,
battery modules number,
Installed/Available capacity



DYNESS-L ---Parameters:
Charge Voltage Limit(CVL):sent by BMS,
48V model is 53.5V,51V model is 56.5V.
Charge Current Limit(CCL):sent by BMS,it will change with SOC changes,when battery SOC is 100% it will become 0A.
Discharge Current Limit(DCL):sent by BMS,it will change with SOC changes,when battery SOC is 15% it will become 0A.

MultiPlus 48/5000/70-100:
Input current limit:you can setup it according to your requirement to control the AC charge power.
DC Voltage:here is the value detected by inverter
DC Current:here is the value detected by inverter



Settings---General
Remote support:ON

Settings---Remote Console
Enable on VRM:ON

Settings---VRM online portal
Logging enabled:Enabled
VRM two-way communication:ON

Step5:You can setup some other setting to make sure battery charge right.

Step6:Make the inverter start charging battery to 100% to calibrate SOC.

Step7:Shut Down

Modules Parallel

1 Remove all the load

2 Turn off DC breaker between the battery and inverter.

3 Disconnect PV/Grid

4 Turn off the inverter power switch,shut down the inverter.

5 Long press the master module SW button to turn off all the batteries,then switch off all the batteries' ON/