Victron & Panasonic DCB-105

Compatible Victron products

All 48V Multis, Quattros and MPPTs based on programmable HVD and LVD voltage levels. Additionally, Panasonic has delevoped a control interfacing unit (CIU) comprising of PLC and data converter, which connects via the CAN bus to the Color Control GX with complete monitoring and control of the storage system.

Notes:

- Panasonic DCB-105 with CIU can only be used in all type of installations including Victron ESS installation: an installation that uses the ESS Assistant.
- With ESS assistant, Panasonic energy storage could be used in parallel with the grid with grid import and export feature. Additionally, an HMI with customizable grid set points for various operating modes such a fixed power, day scheduling, user defined schedule can be implemented.
- Panasonic batteries with CIU and MPPT Solar Chargers with a VE.Can communication port cannot be both connected to the CCGX, because of different canbus speeds. Use Solar Chargers with a VE.Direct comm. port instead.

Wiring of communication cables

1. Plug the CCGX side of that cable into one of the VE.Can sockets on the back of the CCGX.
2. Plug the other end into the CAN port of the data converter which is part of CIU.
3. Then, plug a VE.Can terminator in the other VE.Can socket on the CCGX. Two VE.Can terminators are included with the package of the CCGX as an accessory, only one is used. Keep the other one as a spare.
4. Without properly connecting this cable, the battery will stop charging/discharging after 10 minutes. Also, the battery will not show up on the display of the CCGX.

Panasonic battery: Smart Li-ion battery with in-built BMS and protection control. It communicated with upper system (CIU) on Modbus RTU (RS-485) over a RJ-45 port.These can be stacked in parallel to increase storage capacity.



Multiple batteries: Parallel the batteries using the RJ-45 cable supplied by Panasonic using the link ports on the battery. All batteries communicate on slave mode and are connected to CIU. The system auto configures itself: no software changes necessary.

CIU: It is the interfacing unit between batteries and color control (CCGX)



VEConfigure settings

General tab

1. Check “Enable battery monitor”
2. Set the battery capacity to 56Ah times the number of battery modules.
3. The other parameters (“State of charge when bulk finished” and “Charge efficiency”) can be left to their default setting. They are not used in this setup.

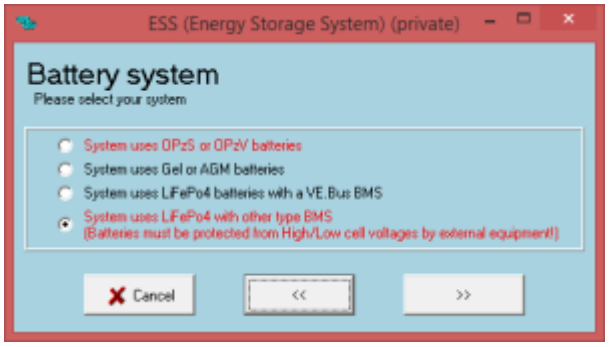
Charger tab

Parameter	Setting
Battery type	Lithium
Charge curve	Fixed
Absorption voltage	52 V
Float voltage	52 V
Absorption time	1h

Note: make sure to double check the float voltage after completing Assistants, and if necessary set it back to 52.0 V.

ESS Assistant

Select the fourth battery type:

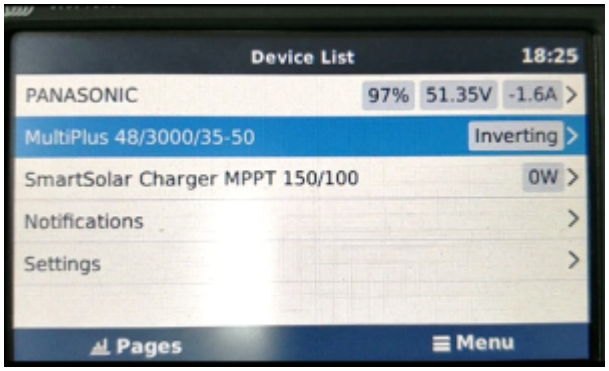


Then:

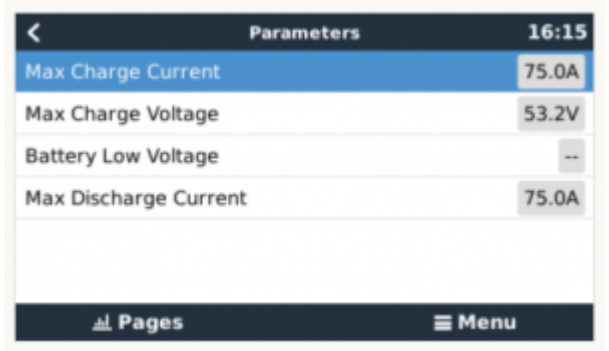
1. Sustain: 49.0V
2. Dynamic cut-off values:
   - 0.005C = 46.14V
   - 0.25C = 45.24V
   - 0.7C = 44.60V
   - 2C = 44.10V
3. Restart offset: do not change

Color Control GX Configuration

- Select the CAN-bus BMS (500 kbits/s) CAN-profile in the CCGX. Menu path: Settings → Services → CAN-profile. Note that this changes the function of a VE.Can port: it is not possible to connect both VE.Can products and a Panasonic battery together.
- After properly wiring and setting up, the Panasonic will be visible as a battery in the device list (if you have multiple batteries a single entry will show up, which represents all batteries).



- The parameters option within the battery page shows the actual battery charge and discharge limits:



FAQ

1. The maximum charge and discharge current is limited to 25A, but the data sheet tells me the maximum is 50A.
    - The maximum current is limited to optimize the battery performance.

1. After charging the battery the max. charge current often changes between 0A and 25A.
    - This happens when the batteries are fully charged (100% SOC) after which the batteries no longer accept charge. Once the batteries are discharged below 95%, charge current can be accepted again and the value of max. charge current changes from 0 to 25A.

From:
https://www.victronenergy.com/live/ - **Victron Energy**

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