

Victron & Pylontech US2000B

Compatible Victron products

All 48V Multis and Quattros. And always a Colour Control GX is necessary in the system, since that has the Canbus port which is used for the (required!) communication between the Pylontech battery and the Victron system.

Notes

Victron & Pylontech integration currently works only in combination with the Hub-4 Assistant. A very flexible configuration for Energy Storage systems. For more information about Hub-4, see its manual.

De-rating, based on the dynamic Pylontech charge- and discharge limits:

Minimum CCGX version is v1.72

The de-rating mechanism is not very precise yet. In other words, do not expect a discharge limit of 30A to result in a precise discharge of 30A.

Actual charge- and discharge limits are visible in the Parameters page. See screenshot below.

Wiring of communication cables

To use the Pylontech and Victron equipment, it is necessary to use a CCGX. It takes care of sending the necessary Canbus keep-a-live message to the battery. Without it, the US2000B will stop charging/discharging after 10 minutes.

A special RJ-45 cable is necessary to connect the Pylontech to the CCGX. Pinout:

Function	VE.Can RJ-45	Pylontech RJ-45
GND	Pin 3	Pin 2
CAN-L	Pin 8	Pin 5
CAN-H	Pin 7	Pin 4

Place a VE.Can terminator in the empty socket on the CCGX.

Connecting multiple batteries: connect the first battery to the CCGX, chain the other batteries using the RJ-45 cable supplied by Pylontech using the link ports on the battery (so connect battery 2 to battery 1, battery 3 to battery 2, etc...).

VEConfigure settings

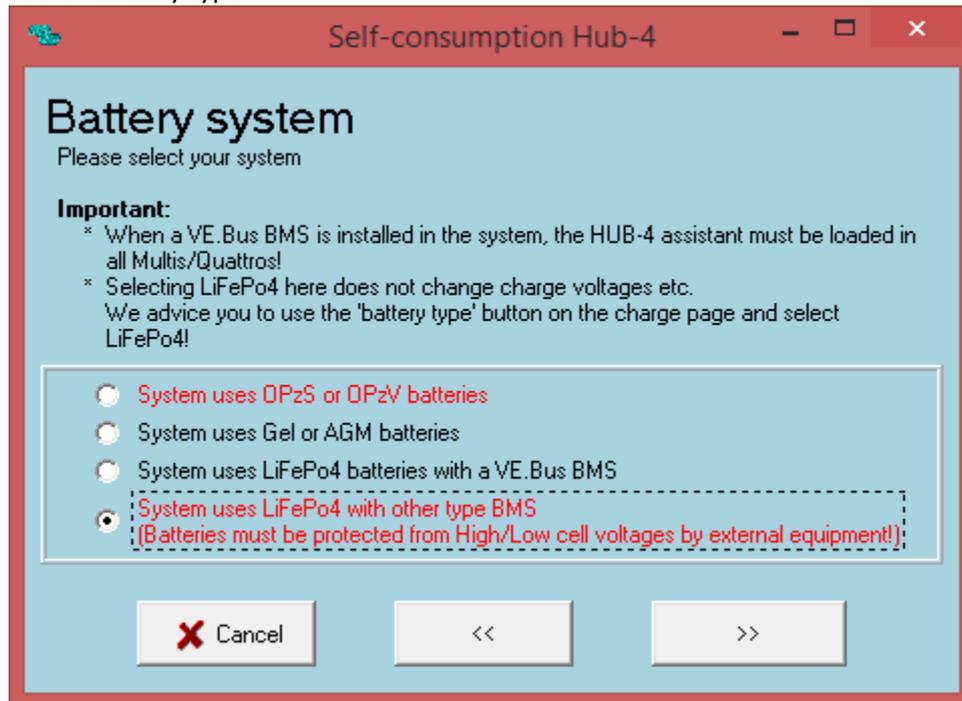
Parameter	Setting
Battery type	Lithium
Charge curve	Fixed

Parameter	Setting
Absorption voltage	53.2 V
Float voltage	53.0 V
Absorption time	1 Hr

Note: make sure to double check the float voltage after completing Assistants, and if necessary set it back to 53.0 V.

Hub-4 Assistant

Select the fourth battery type:



Then:

Enter the battery capacity: 50Ah times then number of connected batteries

Dynamic cut-off values: 47.3V at 0A, 47.2V at 12A, 47.1V at 35A and 47.0V at 100A.

Restart offset: do not change

Configure the system to Stop discharging on low SOC, and set it to 20%. Setting it lower will result in a recharge up to around this percentage immediately after stopping the discharge, which is caused by the Sustain mechanism. There will soon be an update of Hub-4 available that prevents this and makes the full capacity of the battery available.

Colour Control GX Configuration

Enable the CAN-bus BMS Service in the CCGX. Menu path: *Settings* → *Services* → *CAN-bus BMS*. Note that this changes the function of a VE.Can port: it is not possible to connect both VE.Can products and an Pylontech battery together.

After properly wiring and setting up, the Pylontech 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:



Make sure to enable the *Synchronize VE.Bus SOC with battery* setting in the System Setup page in the CCGX: it will copy the State of Charge as reported by the battery to the Multi or Quattro, making Hub-4 work with that SOC.

FAQ

The maximum charge and discharge current is limited to 25A, but the data sheet tells me the maximum is 100A.

The maximum current is limited to keep the battery healthy and reach the 10 year guarantee.

After charging the battery the charge current often changes between 0A and 25A.

This is caused by cell balancing inside the battery. This happens with new batteries and after a deep discharge.