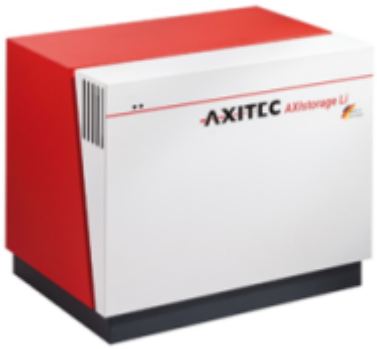
# Victron & AXIstorage Li 7S / 9S

The combination of Victron products with the BMZ ESS 7.0 battery has been tested and certified by the R&D departments. The combination is actively supported by both companies. The AXIstorage 7S/ 9S is identical with the BMZ ESS hardware and software and therefor also compatible.




## 1. Introduction

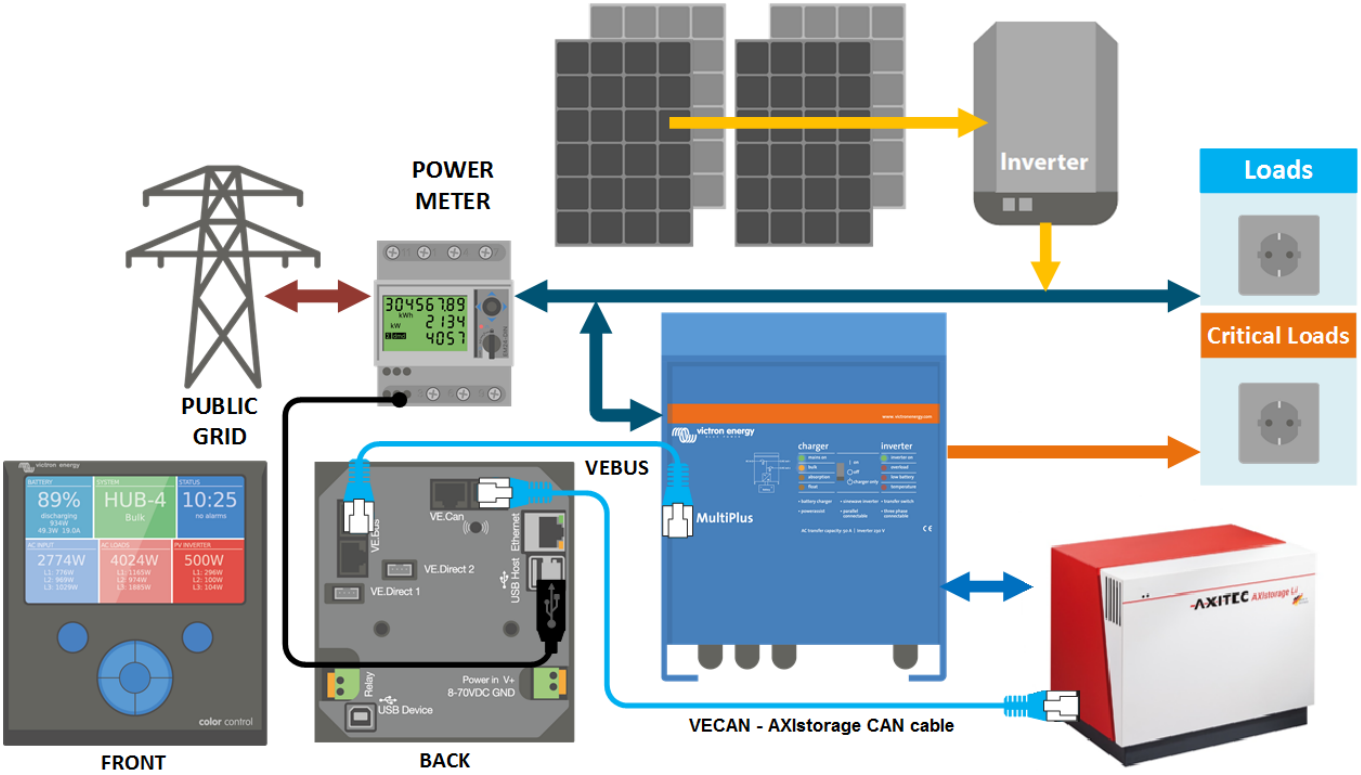
### 1.1 Compatible Victron products

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

### 1.2 Notes

- AXIstorage batteries can only be used in a Victron ESS installation installation that uses the ESS Assistant.
- Paralleling multiple AXIstorage ESS batteries to expand capacity is possible. Contact AXIstorage for more information.
- Derating, based on the dynamic AXIstorage ESS charge- and discharge limits:
  - Minimum CCGX version is v1.72
  - The derating 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 in Chapter 4.

### 1.3 System diagram




## 2. Wiring of communication cables

To use the AXIstorage ESS in Victron system, it is necessary to use a Color Control GX. The Color Control GX takes care of sending the necessary canbus keep-a-live message to the ESS battery. Without it, the battery will open its internal emergency relay after 10 minutes.

A special RJ-45 cable is necessary to connect the battery to the Color Control GX. Pinout:

| Function | VE.Can RJ-45 | AXIstorage 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

## 3. VEConfigure settings

### 3.1 Charge tab

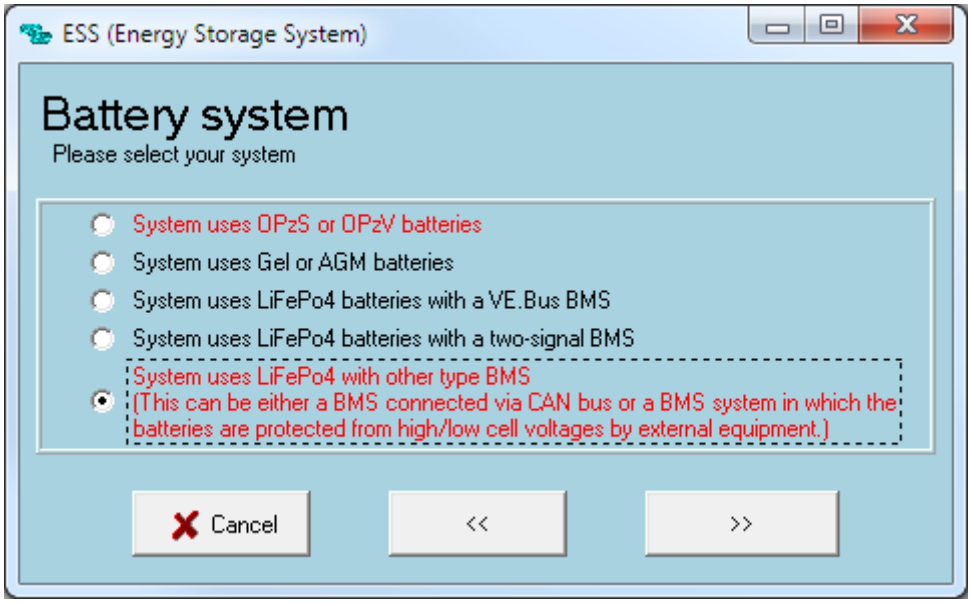
| Parameter | Setting |
|---|---|
| Battery type | Lithium |
| Charge curve | Fixed |
| Absorption voltage | 60.75 V |
| Float voltage | 60.00 V |
| Absorption time | 1 Hr |

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

back to 60.00 V.

### 3.2 ESS Assistant

Select the fourth battery type:




Then:

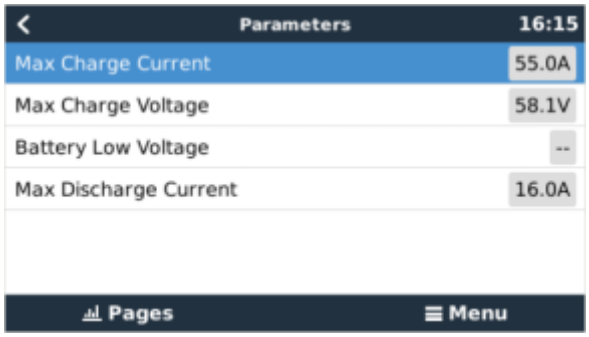
1. Enter the battery capacity:
    1. AXIstorage 7S - 121.5 Ah
2. Do not change the dynamic cut-off values, they have already been set correctly after selecting the lithium battery type.
3. Same for the restart offset: do not change that.

## 4. Color 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 a AXIstorage battery together.
- After properly wiring and setting up, the AXIstorage will be visible as a battery in the device list:




- 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 AXIstorage to the Multi or Quattro, making ESS work with that SOC.

# DISQUS

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