Victron & Soluna

1. Product & System compatibility

1.1 A GX device is required, eg Cerbo GX, etc

It is essential to use the BMS-Can (500 kbit/s) connection type of a GX device with these batteries for communication of charge and discharge limits, error codes and state of charge.

It is possible to use either the BMS-Can or VE.Can ports with this battery. Depending which one you use will require additional configuration on the batteries side, please see the documentation linked below for instructions.

The minimum supported GX firmware version is v3.60. It is recommended to use the latest firmware version on new installations and when trouble shooting issues.

The minimum supported Soluna firmware version is JC3.30

Connecting a Soluna battery to the GX device will automatically enable DVCC and SVS, and disable SCS and STS.

The Soluna battery automatically controls the target voltage on the Victron system (CVL).

If the battery and inverter lose communication for 10 minutes, the battery will enter sleep mode. When the receives a signal from the GX device again the battery will automatically re-awaken.

1.2 CAN-Bus wiring between the battery and GX Device

The Can2 port of the battery communicates with the GX. Because the Pin2 port and Pin6 port on the battery are not defined, either the A-type and B-type communication cables provided by Victron can be used.

VE.Can to CAN-bus BMS type A Cable part number ASS030710018.

Plug the side which is labeled Battery BMS into the Battery BMS. Plug the side labeled Victron VE.Can into the GX device.

Then plug a VE.Can terminator in the other VE.Can socket on the GX device. Two VE.Can terminators are included with the package of the GX device as an accessory. The battery has a built-in CAN terminator, so there is no need to connect a VE.Can terminator on the battery side.

More information about the cable can be found in its manual.

Without properly connecting this cable and terminator, the battery will not reliably show up on the display of the GX device.

It is important to ensure this connection and display of the battery on the GX device display before attempting firmware updates or settings changes on other devices if they depend on the power

supply from the battery. DO NOT attempt to operate the battery cells normally without connection to the BMS.

1.3 All 48V Multis, MultiPlus, Quattros and RS models are compatible

The minimum supported firmware version for VE.Bus models is 469. Minimum supported firmware for RS models is 1.16. Updating to the latest firmware is recommended for new installations, and troubleshooting issues.

These VE.Bus inverter/charger units must be connected to the GX device via the VE.Bus connection port.

In grid connected systems, advanced control functions are configurable in the ESS settings on the GX device.

In off-grid systems, the control functions of the Battery Management System (BMS) are built into the latest version of the GX device.

1.4 Solar Charger compatibility

All 48V BlueSolar and SmartSolar MPPT Chargers are compatible.

Some of our Solar Chargers feature a VE.Direct communication port, some feature a VE.Can communication port, and some feature both. Both of these types of communication ports can be used to connect the Solar charger to the GX Device. Such connection is mandatory, because it is used to regulate charge currents and voltages.

2. Minimum battery sizing

For reliable operation there are minimum numbers of batteries required for different Victron inverters. Please contact your battery supplier for these specifications.

3. Further system integration documentation

Under normal operation target charging voltage is automatically set by the BMS via the DVCC system, when the battery and Victron products are correctly connected to a GX device.

Further details about installation and configuration is available from your battery manufacturer.

4. Support & FAQ

What are the maximum cell & battery voltages before protection activates? What happens when the battery is overcharged?

If there is still charging current when the battery is overcharged beyond 57.3V, or any cell above 3.65V, the battery will actively disconnect its internal charging circuit and send a high cell voltage alarm to the GX device.

Does the battery autorecover when it has been completely discharged? Does it need manual intervention (e.g switch or breaker?)

When the battery is completely discharged and the battery voltage is lower than 47.65V, the battery will actively send a force charge command to the GX device. When the inverter has an power source, it will actively charge the battery; if the battery has not been charged until the battery voltage is lower than 44.8V, the battery will enter low-voltage sleep state after ten minutes, and the battery needs to be restarted manually.

Does the Soluna battery balance itself? Soluna battery cells will balance themselves between 2800mV~3650mV. The maximum voltage of the battery pack is 57.3V, and the maximum voltage of the single cell is 3.65V.

Support for this battery should first come from your battery supplier.