Victron & TAB

1. Product & System compatibility

TAB has undertaken full Victron BMS-Can specification compliance testing and has successfully passed.

Testing was completed with TAB e.module L5.1 running BMS firmware version 0.3.4-8 and Cerbo GX running VenusOS v3.63

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

Lowest cell voltage	M002C009	3.391 V
Highest cell voltage	M001C002	3.405 V
Minimum cell temperature	M001S002	24 °C
Maximum cell temperature	M001S004	24 °C
Battery modules	2 online	0 offline
Number of modules blocking charge / discharge	0	0
Installed / Available capacity	200 Ah	199 Ah

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

It is recommended to use the latest firmware version on new installations and when trouble shooting issues.

Victron BMS cable type A or B can be used to connect between the TAB COM port and the GX device.

Battery control behaviour

When the battery is started it needs to make connection with the GX device within 5 minutes. Once the communication is established: If the battery doesn't receive any communications from the GX device for 30 minutes it will shut down.

At 3.60V cell voltage battery will trigger a warning, at 3.70V battery will disable charging. If the battery is overcharged, only the module with overcharged cells will isolate charging mosfets and stop charging, other modules can still charge, but CCL will be 0. The system can normally discharge.

When the battery is over discharged (min cell voltage below 2.70V and above 2.00V) it will still allow charging with low current (CCL 5A per module).

If the minimum cell voltage drops below 2.00V it will disable charging and discharging and you will need to contact your supplier for support.

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

The minimum supported firmware version for VE.Bus models is 469. These inverter/charger units must be connected to the GX device via the VE.Bus connection port.

Minimum supported firmware for Inverter RS and Multi RS models is 1.16, and these must be connected via the VE.Can port, on a seperate VE.Can (250kbps) interface.

Updating to the latest firmware is recommended for new installations, and troubleshooting issues.

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.

1.3 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.

When planning to use the VE.Can communications port to connect the Solar Charger(s), make sure to select a GX Device that has sufficient CAN-Bus ports. The Color Control GX has only one such port, its VE.Can port, and is therefor not suitable. All other GX Devices can be used, since they have two ports. One can then be used to connect the BMS-Can battery, and the other to connect the VE.Can Solar Charger.

2. Minimum battery sizing

Minimum battery sizing limits apply. Contact your battery supplier for further details.

3. Further system integration documentation

tab_e.module_l5.1_operation_manual.pdf

3. Installation Video

Video

4. Support

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