



The GX TOUCH 50 and the CERBO GX are enlarged visible in this drawing.

The VE.Bus BMS NG is enlarged visible in this drawing. There is NO BMS negative connection to prevent ground loops. Ground comes through the VE.Bus UTP cable.

The SmartBatteryProtect must be programmed for Li-Ion mode-C 12 Volt either through programming on the device itself or with a Bluetooth enabled smartphone or tablet. Connect the Load disconnect output of the VE.Bus BMS-NG to the Remote H terminal of the SBP.

**IMPORTANT INFORMATION !**  
Victron Lithium Batteries charge & discharge controlled by BMS & GX Device.  
In systems with Victron Lithium NG Batteries, it's important that all charging devices as well as loads are controlled by the BMS and GX Device. Here is how that is taken care of in this system:  
1 - MultiPlus Inverter/charger: digitally via the GX Device, DVCC feature.  
2 - Solar charger: digitally via the GX Device, DVCC feature.  
3 - Orion XS: digitally via the GX Device DVCC feature, and using the switched positive wire from the engine ignition towards the H contact of the Orion XS (if needed).  
4 - DC Loads: via SmartBattery Protect 220 and LD signal from BMS NG.  
5 - AC Loads: controlled together with the MultiPlus Inverter/Charger.

**WARNING !**  
PROTECTIVE COVERS ARE NEEDED HERE.

KEEP POSITIVE BATTERY CABLES ALL AS SHORT AS POSSIBLE AND ALL AT THE SAME LENGTH !

KEEP NEGATIVE BATTERY CABLES ALL AS SHORT AS POSSIBLE AND ALL AT THE SAME LENGTH !

**IMPORTANT INFORMATION !**  
When operating in inverter mode, the Neutral output of a inverter/charger must be connected to ground to guarantee proper functioning of a GFCI or RCD device. In case of a split phase supply the Neutral also must be grounded.  
The primary Case ground connection from a inverter charger like a Multi or a Quattro, must be connected to the Central Negative Busbar of the DC system. Size of this cable should be one size smaller compared to its total connected DC negatives per device (ABYC).

**IMPORTANT INFORMATION !**  
To comply with ABYC E-11, each DC Power cable towards the MultiPlus unit needs to be able to carry the full load per cable !

**IMPORTANT INFORMATION !**  
Recommended AC Out-1 cable/breaker size MultiPlus  
With Power assist the MultiPlus can add 3kW to the output load when needed. Together with the adjustable 50A input this all adds up to the max sum of input and output current of 50+25=75A. An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output. Cable size must be adjusted accordingly.

**IMPORTANT INFORMATION !**  
Recommended AC Out-2 cable/breaker size MultiPlus  
AC Out-2 only is available when power is present on AC IN. During battery operation it will be disconnected. AC Out-2 supports up to 25A. An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output. Cable size must be adjusted accordingly.

**IMPORTANT INFORMATION !**  
Recommended DC cable/fuse size MultiPlus  
0-5 m cable length: 4 x AWG 1/0, 5-10 m cable length: 4 x AWG 2/0. When used in closed conduits, cable size should double. Cable length stands for the distance between the battery and the MultiPlus connections !!! Recommendations are without other loads in the system and these also should be taken into account for proper main battery, main fuse & main switch cables !!! Fuse size should be 400A.

**IMPORTANT INFORMATION !**  
Recommended AC IN cable/breaker size MultiPlus  
AC IN must be protected by a circuit breaker rated at 50A max or less. This depends heavily on the size of the connected power source. The input current must be adjusted to fit the size of the connected power source. The breaker and cable size for AC IN should be adjusted accordingly.

**IMPORTANT INFORMATION !**  
120 VOLT AC IS EXTREMELY HAZARDOUS !!!  
DO NOT TOUCH ANY LIVE WIRED PARTS OF THE INSTALLATION !!!  
WHEN IN DOUBT, ALWAYS CONSULT YOUR VICTRON DEALER !!!

2 x Lithium 12.8V-200Ah NG LiFePO4