



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

The VE.Bus BMS is enlarged visible in this drawing. The BMS GND is not connected to prevent ground loops. Ground comes through the VE.Bus UTP cable.

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

There are several configuration options possible. Read the Orion-Tr manual carefully and choose the one fitting your installation.

THE BMV SHUNT CAN BE UPGRADED FROM STANDARD 500A TO 1000A. THE BMV SHUNT IS MOUNTED DIRECT ON BOTH BUSBARS.

**IMPORTANT INFORMATION !**  
From firmware v489 for the MultiPlus, installing a system with Victron Lithium Smart batteries and the VE.Bus BMS is as simple as just connecting it. No more mandatory use of VEConfigure, VictronConnect will do fine. No more installing an Assistant as the firmware autotest detects the VE.Bus BMS. No configuration of charge Voltages or anything else either.

**IMPORTANT INFORMATION !**  
The MultiPlus II series do not need a VE.Bus mains detector anymore. The functions of the VE.Bus mains detector in relation to the VE.Bus BMS have been built inside the Inverter Charger.

**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 must be identical to connected DC negative.

**IMPORTANT INFORMATION !**  
Short functional overview MultiPlus-II 12/3000/120-50 2x120V Inverter/Charger  
The AC input can be supplied from a split phase 120V/240V or a single phase 120V power source. When AC is available the MultiPlus will feed AC power through to the AC output as a mirror image from the input. The MultiPlus connects to the preferred input L1 and Neutral. Power needed to charge the batteries will be drawn from L1 and L2 of output.  
When no AC is available on the input. The inverter output is 120V single phase. The MultiPlus connects both output lines L1 & L2 of output together to provide 120VAC to loads on either line. Any 240VAC loads will therefore only be supplied when the MultiPlus is connected to a split phase AC power source at its input. This will prevent heavy loads such as 240VAC water heaters or air-conditioning units from draining the batteries.

**IMPORTANT INFORMATION !**  
Recommended AC Out1 cable/breaker size MultiPlus  
AC Out2 only is available when power is present on AC IN. During battery operation it will be disconnected.  
AC Out2 supports up to 50A.  
An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output for each 120V leg and 240V. Cable size must be adjusted accordingly.

**IMPORTANT INFORMATION !**  
Recommended AC Out2 cable/breaker size MultiPlus  
AC Out2 only is available when power is present on AC IN. During battery operation it will be disconnected.  
AC Out2 supports up to 50A.  
An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output for each 120V leg and 240V. Cable size must be adjusted accordingly.

**IMPORTANT INFORMATION !**  
Recommended DC cable/fuse size MultiPlus-II  
0.5 m cable length: 4 x 900mm, 6-10 m cable length: 4 x 700mm. When used in closed conduits, cable size should double. Cable length stands for the distance between the battery and the MultiPlus connections!!! Recommendations are a combination MCB/RCD must be installed on the output for each 120V leg and 240V. Cable size must be adjusted accordingly!!! Fuse size should be 400A.

**IMPORTANT INFORMATION !**  
Recommended AC IN cable/breaker size MultiPlus-II  
AC IN must be protected by a circuit breaker rated at 80A 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 its connected power source. The breaker and cable size for AC IN should be adjusted accordingly.

**WARNING**  
120 & 240 VOLT AC IS EXTREMELY HAZARDOUS !!! DO NOT TOUCH ANY LIVE WIRE PARTS OF THE INSTALLATION !!! WHEN IN DOUBT, ALWAYS CONSULT YOUR VICTRON DEALER !!!

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 !

- <20V L1 No Break load1>
- <20V L1 No Break load2>
- <20V L2 No Break load1>
- <20V L2 No Break load2>
- <20V L1+2 No Break load1>
- <20V L1+2 No Break load2>
- <20V L1+2 Switched load1>
- <20V L1+2 Switched load2>

- <20V L1+2 Switched load1>
- <20V L1+2 Switched load2>
- <20V L1+2 Switched load3>
- <20V L1+2 Switched load4>
- <20V L1+2 Switched load5>
- <20V L1+2 Switched load6>