

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.

KEEP POSITIVE BATTERY CABLES ALL AT THE SAME LENGTH !

KEEP NEGATIVE BATTERY CABLES ALL AT THE SAME LENGTH !

2 x Lithium 12.8V-100Ah Smart LiFePO4

Drawing BJE-260A

**Recommended AC Out cable/breaker size MultiPlus**  
 With Power assist the MultiPlus can add 1.3 kW to the output load when needed. Together with the adjustable 16A input this all adds up to the max sum of input and output current of 16+5.6=21.6A. An Earth leakage with breaker or a combination MCB/RCD must be installed on the output. Cable size must be adjusted accordingly.

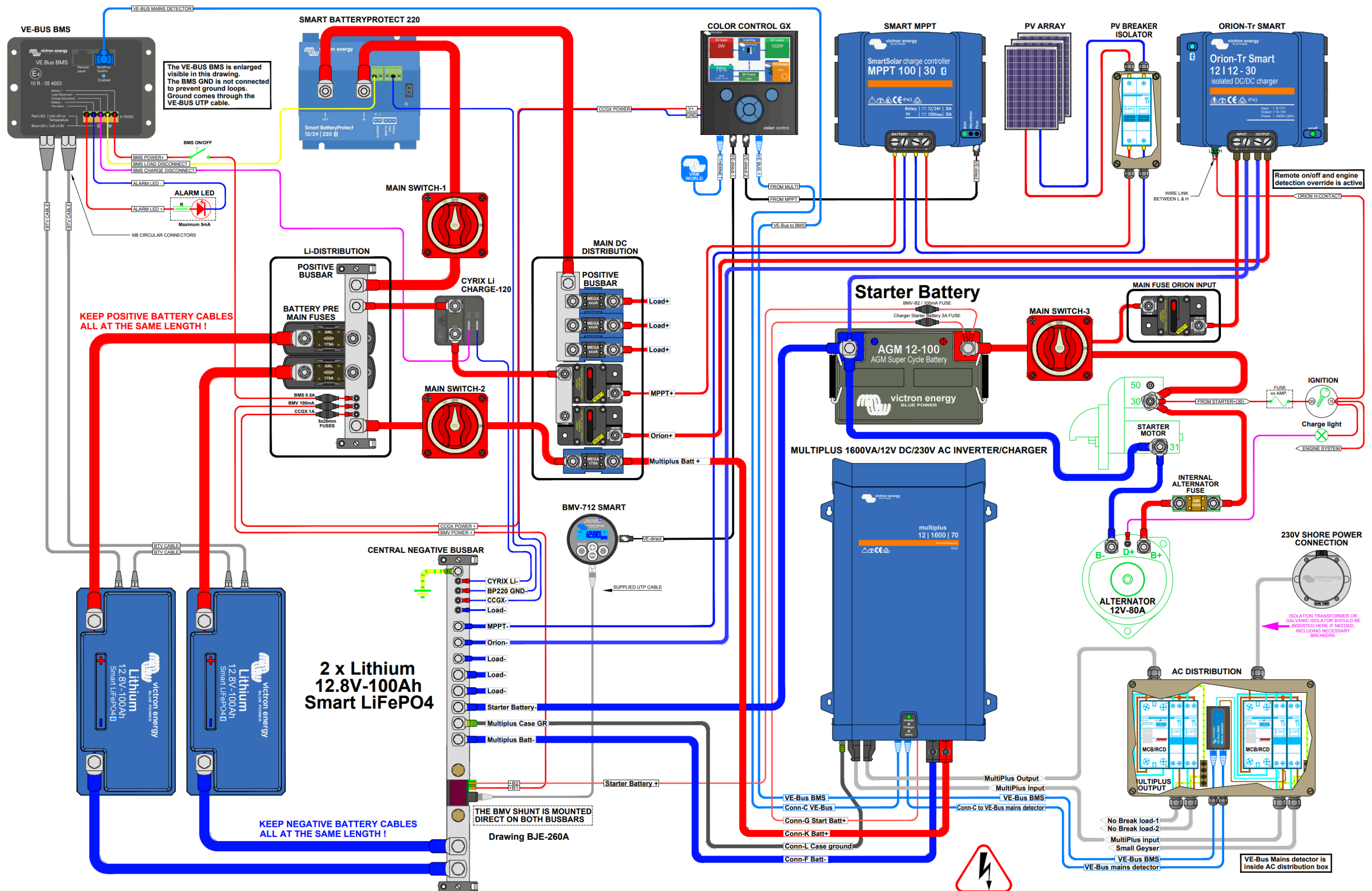
**Recommended DC cable/fuse size MultiPlus**  
 0-5 m cable length: 50SQmm  
 Cable length stands for the total distance between the battery connections plus and minus and the MultiPlus connections ! Recommendations are without other loads in the system and these also should be taken into account for proper main battery, main fuse & main switch cables ! INTERNAL Fuse size should be 200A.

**Recommended AC In cable/breaker size MultiPlus**  
 AC IN must be protected by a circuit breaker rated at 16A 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.

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



# 1.6kVA 12V MultiPlus 230 Volt system example 4 PIN VE-Bus BMS-Lithium Orion-Tr



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Drawing BJE-260A

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**Recommended DC cable/fuse size MultiPlus**  
 0-5 m cable length: 50SQmm  
 Cable length stands for the total distance between the battery connections plus and minus 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!  
 INTERNAL Fuse size should be 200A.

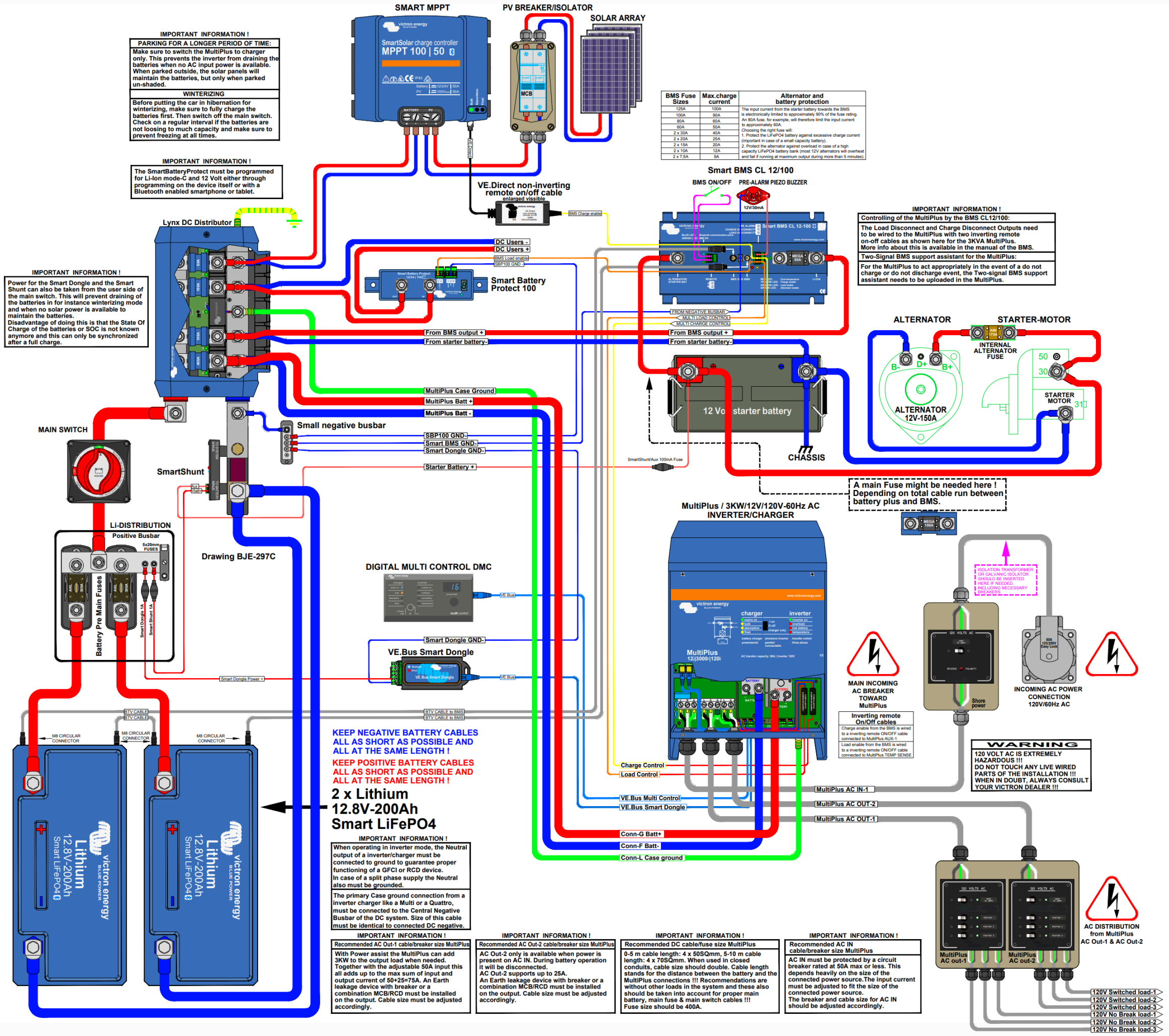
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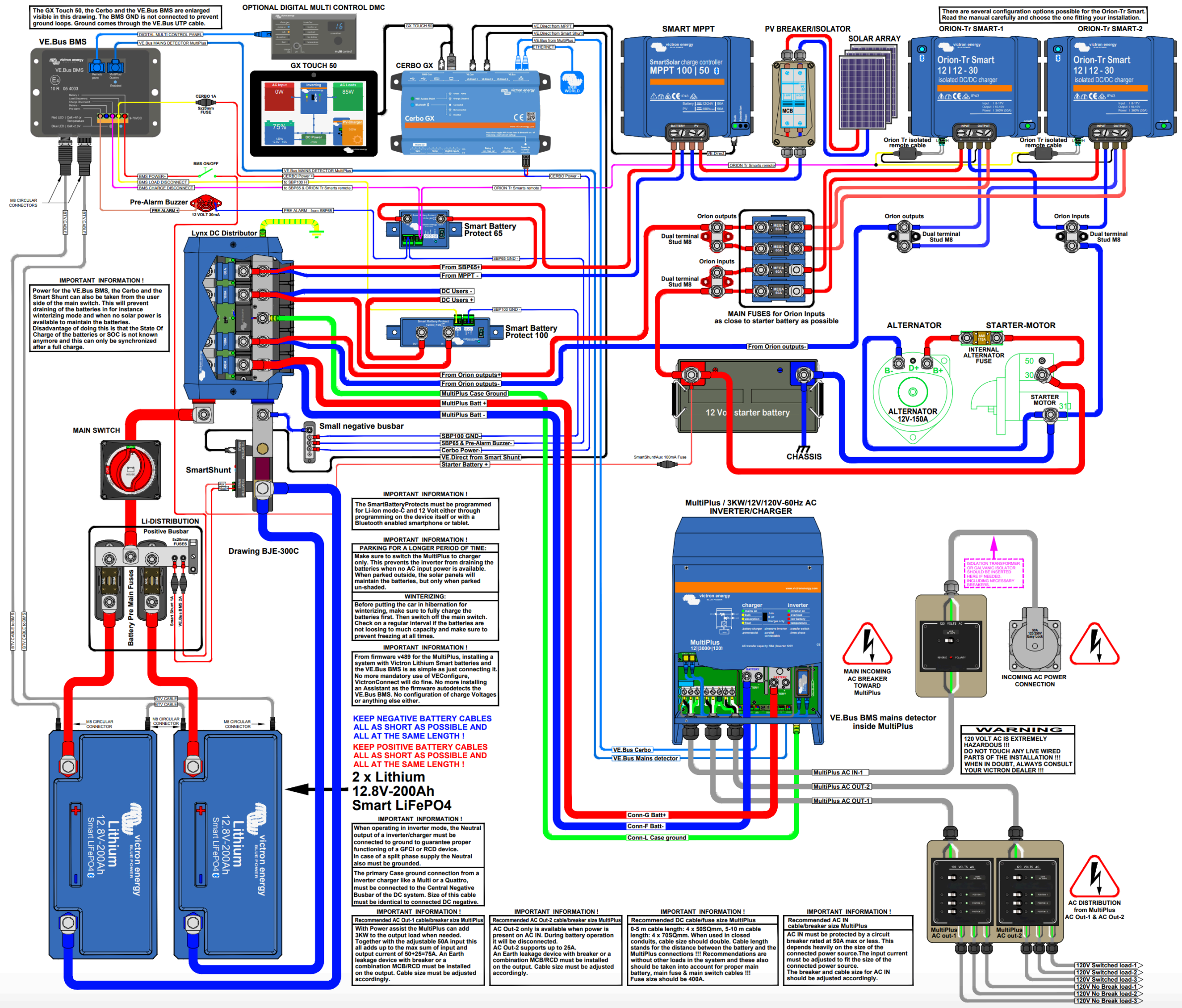
# 1.6kVA 12V MultiPlus 230 Volt system example 5 PIN VE-Bus BMS-Lithium Orion-Tr





US-VAN Drawing Smart BMS CL12/100 MultiPlus 3KW DMC 400Ah Li VEBus Smart Dongle & Shunt SBP 100A MPPT 100/50

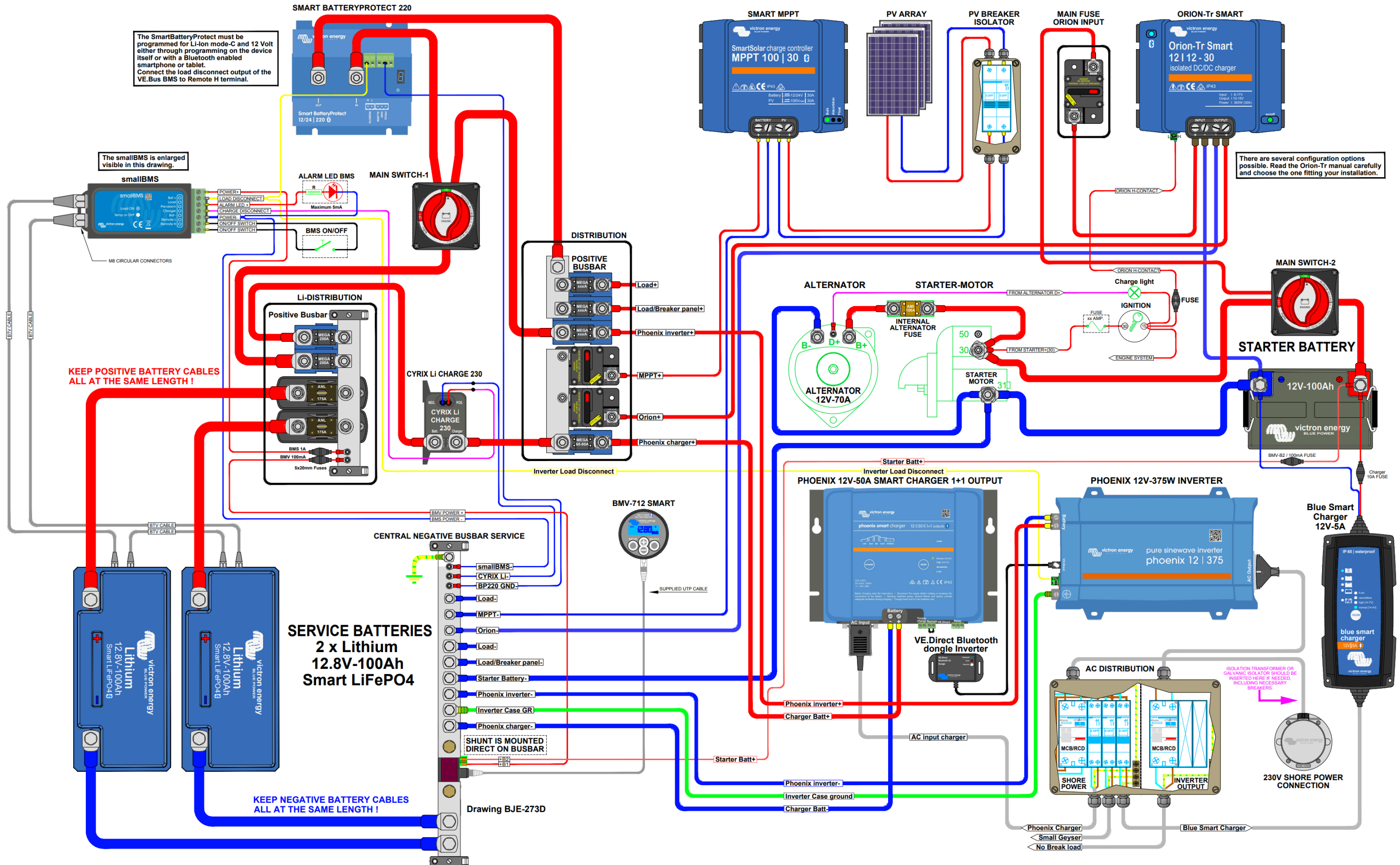




US-VAN Drawing VEBus BMS MultiPlus 3KW DMC 400Ah Li Cerbo SBP 100A & 65A SmartShunt MPPT 100-50 OrionTr







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 disconnect output of the VE-Bus BMS to Remote H terminal.

The smallBMS is enlarged visible in this drawing.

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

KEEP POSITIVE BATTERY CABLES ALL AT THE SAME LENGTH !

**SERVICE BATTERIES**  
2 x Lithium  
12.8V-100Ah  
Smart LiFePO4

KEEP NEGATIVE BATTERY CABLES ALL AT THE SAME LENGTH !

Drawing BJE-273D

**Setup and change of settings trough Bluetooth**  
All Bluetooth accessible devices can be setup and monitored with use of the VE.Smart Network by using the freely downloadable Victron Connect App. When in doubt, consult your Victron dealer.

**Recommended DC cable/fuse size Phoenix charger**  
50A charger 0-4 m cable length: 16SQmm  
Cable length stands for the total distance between the battery connections plus and minus and the Phoenix smart charger connections ! Fuse size should be 60-80A max.  
Max cable size to connect is 16SQmm.

**Recommended DC cable/fuse size Phoenix inverter**  
375W Inverter with 0-1,5 m cable length: 6SQmm  
375W Inverter with 1,5-3 m cable length: 10SQmm  
Cable length stands for the total distance between the battery connections plus and minus and the Phoenix Inverter connections ! External Fuse size should be 40-50A max.

**Recommended AC cable/breaker sizes**  
AC Shore power IN must be protected by a MCB/RCD circuit breaker rated at 16A max or less depending on the size of the connected users. AC Inverter OUT must be protected by MCB/RCD circuit breaker combination rated at the size of the Inverter. Cable sizes need to be adjusted accordingly.



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# VE.Direct drawing with Phoenix charger 12/50-1 inverter 375W Li Batt smallBMS MPPT 100/30 Orion-Tr Smart