



The VE-BUS BMS is entangled in this drawing. The BMS CAN is not connected to prevent ground loops. Ground comes through the VE-BUS VTP cable.

Both Smart BatteryProtects must be programmed for Li-Ion mode-C and 24 Volt either through programming on the device itself or with a Bluetooth enabled smartphone or tablet. Connect the load disconnected output of the VE-Bus BMS to the HomeTerminal of the SEP-220 and the HomeTerminal output of the VE-Bus BMS to the M-terminal of the SEP-100.

IMPORTANT INFORMATION!
In systems with Victron Smart Lithium Batteries it's important that all charging devices as well as loads are controlled by the BMS & GX device. Here is how that is taken care of in this system:
1. Quattro-II Inverterchargers: digitally via the GX Device, DVCC feature. Read the DVCC manual about the possibilities and what to do.
2. Solar charger: digitally via the GX Device, DVCC feature. Read the DVCC manual about the possibilities and what to do.
3. Alternator: status has that it is Lithium proof and only plays a figurative role in charge possibility and will be controlled by the BMS and SmartBatteryProtect 100.
4. DC Loads: via BMS and SmartBatteryProtect 220.
5. AC Loads: controlled together with the Quattro-II Inverterchargers.

KEEP POSITIVE BATTERY CABLES ALL AT THE SAME LENGTH!

4 x Lithium 25.6V-200Ah-a Smart LiFePO4

KEEP NEGATIVE BATTERY CABLES ALL AT THE SAME LENGTH!

Drawing BJE-309A

SmartShunt 1000A

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 wire 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!
Quattro-II 3 phase setup programming
The 3 phase setup programming has to be completed with Victron's VE-Bus Config before anything else.
Quattro-II programming with VECFirmware
After completing the 3 phase setup programming, further necessary settings can be made with VECFirmware.

IMPORTANT INFORMATION!
Recommended AC Out 1 cable/size Quattro-II
AC Out-2 only is available when power is present on AC In-1 for AC In-2. During battery operation it will be disconnected. AC Out-2 supports up to 80A per phase. 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/size Quattro-II
AC Out-2 only is available when power is present on AC In-1 for AC In-2. During battery operation it will be disconnected. AC Out-2 supports up to 80A per phase. 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/size Quattro-II
6.6 in cable length: 4 x 9502mm 6-10 in cable length: 4 x 9502mm. When used on closed conduits, cable size between the battery connections and the Quattro. Recommendations as without other loads in the system and these also should be taken into account for the proper main battery, main fuse & main switch cables !!! Fuse size should be 400A per Quattro-II.

IMPORTANT INFORMATION!
Recommended AC In-1 & AC In-2 cable/size Quattro-II
2500Vdc VOLTAGE IS DANGEROUS! DO NOT TOUCH ANY LIVE WIRED PARTS OF THE UNIT WHEN IN DOUBT ALWAYS CONSULT YOUR VICTRON DEALER !!!

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FOR A PROPER FUNCTION OF THE 3 PHASE QUATTRO-II CONFIGURATION THE PHASE ROTATION FOR SHORE POWER AND GENERATOR POWER HAS TO BE CONNECTED CORRECTLY FOLLOWING L1,L2,L3.

SHORE POWER CONNECTION CEE Form 5 pole 16A



MAIN OUTGOING BREAKERS TOWARDS AC DISTRIBUTION

MAIN INCOMING AC BREAKERS TOWARDS QUATTROS

MAIN DC DISTRIBUTION

SHORE POWER CONNECTION

GENERATOR

ALTERNATOR (Lithium Proof)

ARGOFT BATTERY ISOLATOR

MPPT

CERBO GX

GX TOUCH 50

VE-BUS BMS

SMART BATTERY PROTECT 220

SMART BATTERY PROTECT 100

MAIN SWITCH-4

LI-DISTRIBUTION

POSITIVE BUSBAR

CENTRAL NEGATIVE BUSBAR

QUATTRO II INVERTER-CHARGER MASTER L1

QUATTRO II INVERTER-CHARGER FOLLOWER L2

QUATTRO II INVERTER-CHARGER FOLLOWER L3

MAIN INCOMING AC BREAKERS TOWARDS QUATTROS

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QUATTROS INPUT 2

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