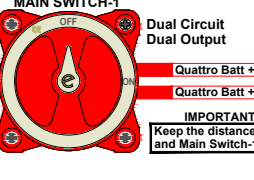
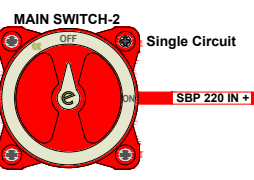


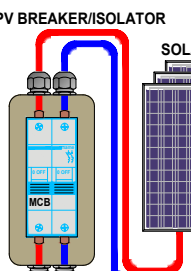
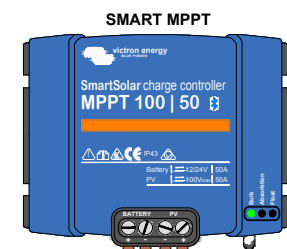
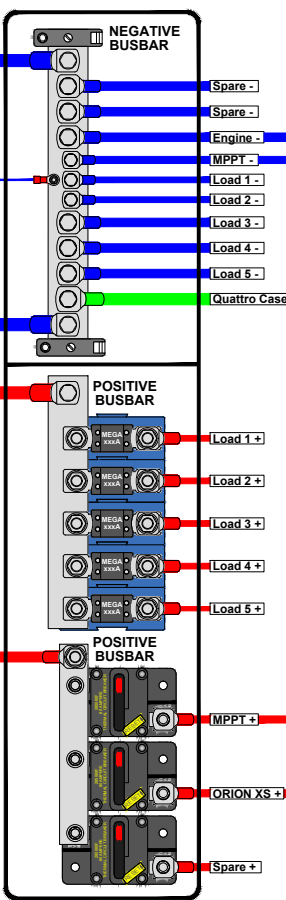
IMPORTANT INFORMATION !
The SmartBatteryProtect must be programmed for Li-Ion mode-C and 12 Volt either through programming on the device itself or with a Bluetooth enabled smartphone or tablet.

IMPORTANT INFORMATION !
Victron Lithium NG 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 - Quattro 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.
4 - DC Loads: via SmartBattery Protect 220 and ATD signal from the BMS.
5 - AC Loads: controlled together with the Quattro Inverter/Charger.

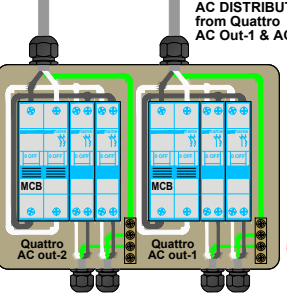
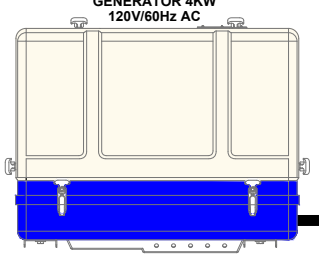
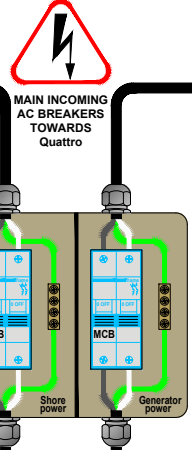
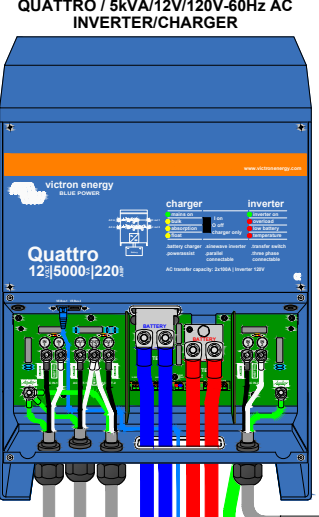
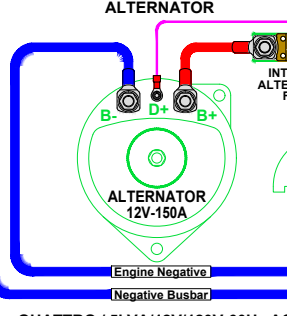
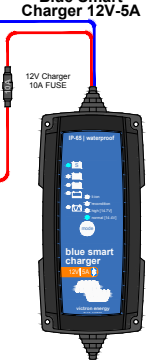
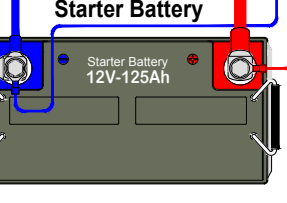
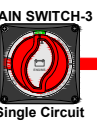
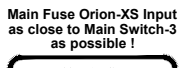
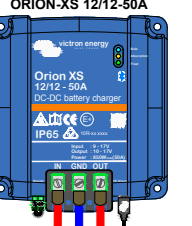
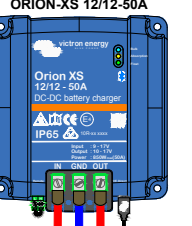
SMART BATTERY PROTECT 220 (SBP)



2 x Lithium12.8V-300Ah NG-LifePO4



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



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

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 one size smaller or identical to the total connected DC negatives (ABYC).

IMPORTANT INFORMATION !
Recommended AC Out-1 cable/breaker size Quattro
With Power assist the Quattro can add 5KW to the output load when needed. Together with the adjustable 100A input this all adds up to the max sum of input and output current of 100+42=142A. 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 Quattro
AC Out-2 only is available when power is present on AC IN-1 or AC IN-2. During battery operation it will be disconnected. AC Out-2 supports up to 50A. 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 Quattro
0-5 m cable length: 4 x AWG 4/0. When used in closed conduits, cable size should double. Cable length stands for the distance between the battery and the Quattro 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 according to manual: 800A.
Fuse size used in this drawing is 2x300-350A Mega.

IMPORTANT INFORMATION !
Recommended AC IN-1 & AC IN-2 cable/breaker size Quattro
AC IN-1 & AC IN-2 both must be protected by a circuit breaker rated at 100A max or less. This depends heavily on the size of the connected power source. The input currents must be adjusted to fit the size of each connected power source. The breaker and cable size for both AC IN-1 & AC IN-2 should be adjusted accordingly.

120V Switched load-1
120V Switched load-2
120V No Break load-1
120V No Break load-2

Blue Smart charger