VICTRON ENERGY - NG EXTERNAL BMS EXAMPLE WIRING DIAGRAM

VERSION 3 - MAY 2025

VICTRON NG SMART LITHIUM BATTERIES - 300 AH EACH

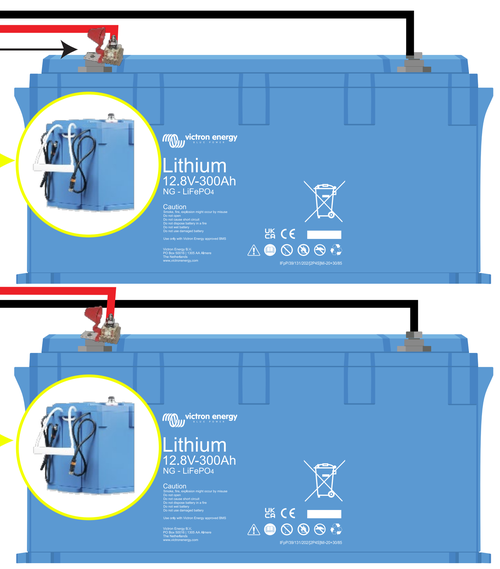
250 AMP TERMINAL/MRBF FUSE ON EACH BATTERY POSITIVE TERMINAL

M8 (3-POLE) CABLES FROM BATTERIES CONNECT TO EACHOTHER (DAISY CHAINED). THEN ONE EXTENSION CABLE IS USED TO CONNECT THE STRING OF BATTERIES TO THE BMS AS SHOWN.

2/0 OR 4/0 WIRE FROM THE BATTERIES TO THE LYNX DISTRIBUTOR

CABLES FROM BATTERIES TO THE LYNX DISTRIBUTOR SHOULD BE SAME LENGTH

ADDITIONAL BATTERIES CAN BE ADDED



SHORE POWER 30 AMP BREAKER

10/3 WIRE

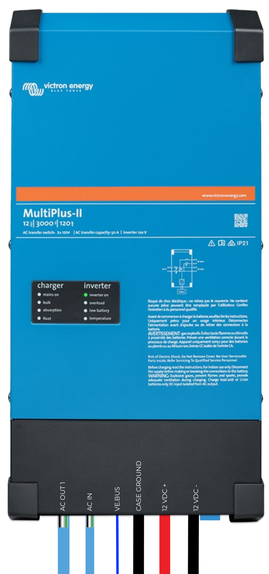
30 AMP SHORE POWER INLET

HDMI VIDEO AND USB POWER FROM CERBO GX.

USE HIGH QUALITY, SHIELDED HDMI EXTENSION CABLE AND HIGH QUALITY USB EXTENSION

NOTE: THE TOUCH GX CAN BE POWERED FROM ANY USB USB POWER SUPPLY

VICTRON MULTIPLUS II 12/3000/120 INVERTER/CHARGER



10/3 WIRE

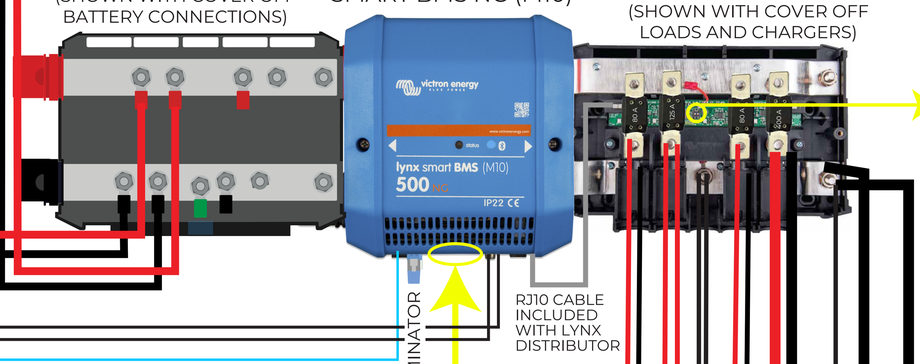
DARK BLUE: VE.BUS FROM MULTIPLUS TO CERBO GX

VICTRON CERBO GX

VICTRON LYNX POWER IN M10 (SHOWN WITH COVER OFF BATTERY CONNECTIONS)

VICTRON LYNX SMART BMS NG (M10)

VICTRON LYNX DISTRIBUTOR M10 (SHOWN WITH COVER OFF LOADS AND CHARGERS)



WHEN USING MORE THAN 1X LYNX DISTRIBUTOR, YOU MUST "ADDRESS" THEM SO THAT THEY APPEAR ON THE LYNX BMS AND CERBO GX AS DISTINCT DEVICES.

THERE ARE TWO VERY SMALL DIP SWITCHES THAT YOU CONFIGURE TO ADDRESS EACH LYNX AS A, B, C OR D.

DETAILS IN SECTION 6 OF THE LYNX DISTRIBUTOR MANUAL.

2X VICTRON ORION XS 50 AMP DC-DC CHARGERS (NON-ISOLATED)

VE.DIRECT

VE.CAN

VE.CAN TERMINATOR

RJ10 CABLE INCLUDED WITH LYNX DISTRIBUTOR

4/0 AWG

4/0 AWG

4/0 AWG WIRE

4 AWG

CHASSIS GROUND

NOTE: THIS CASE/CHASSIS GROUND SHOULD BE NO SMALLER THAN ONE SIZE LESS THAN THE DC SUPPLY CABLES TO THE INVERTER/CHARGER. SO THAT'S 4/0 AWG IN THIS EXAMPLE DIAGRAM.

6/3 WIRE

4 AWG
2X WIRES ROUTED TOGHETER FROM FUSE NEAR VEHICLE BATTERY TO THE TWO INPUTS ON THE DC-DC CHARGERS

60 AMP MEGA FUSES LOCATED LESS THAN 7" FROM BATTERY CONNECTION

4 AWG

VEHICLE BATTERY

10 AWG - CASE/CHASSIS GROUND CONNECTION TO NEGATIVE BUS

6 AWG

WIRE GAUGES ARE EXAMPLES ONLY. REFER TO ABYC AMPACITY CHARTS TO SIZE YOUR WIRES CORRECTLY BASED ON YOUR SYSTEM'S SPECIFIC CONDITIONS

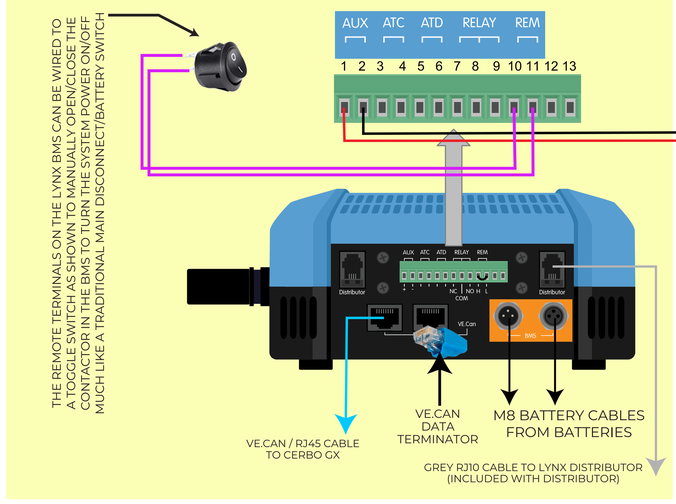
GREEN: VE.DIRECT FROM BOTH SOLAR CHARGE CONTROLLERS TO CERBO GX

VICTRON 100/50 SOLAR CHARGE CONTROLLER

SOLAR ARRAY DISCONNECT SWITCHES. TYPICALLY INSTALLED INTO A BOX WITH A "DIN RAIL".

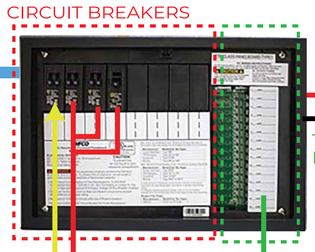
10 AWG

LYNX SMART BMS NG MULTICONNECTOR (TERMINAL BLOCK) DETAIL
(ZOOM IN ON PDF)



12VDC SUPPLY TO CERBO GX

AC AND DC LOAD CENTER
120 VOLT AC CIRCUIT BREAKERS



12 VOLT DC FUSES

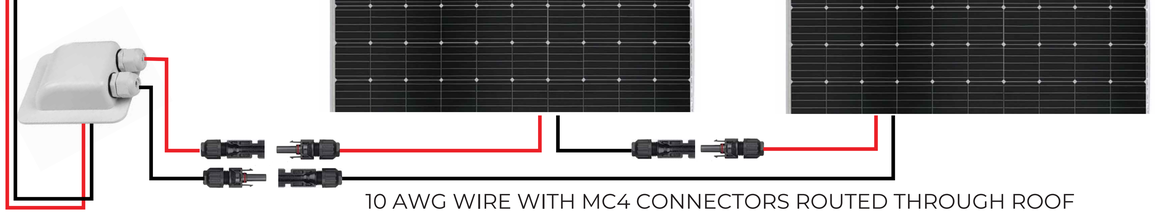
12VDC FUSES TO BRANCH CIRCUITS

50 AMP MAIN BREAKER

15 OR 20 AMP 120VAC BRANCH CIRCUITS

~20 FEET 10 AWG CABLES
RED W/ FEMALE MC4
BLACK W/ FEMALE MC4
FROM "ENTRY GLAND"
TO CHARGE CONTROLLERS

2x 200 WATT NEWPOWA SOLAR PANELS WIRED IN SERIES



10 AWG WIRE WITH MC4 CONNECTORS ROUTED THROUGH ROOF WITH AN "ENTRY GLAND"

THIS IS NOT ELECTRICAL ADVICE.
THIS IS AN ILLUSTRATION OF ELECTRICAL SYSTEMS THAT WE HAVE USED IN OUR VANS.
ALWAYS DO YOUR OWN RESEARCH AND USE THIS INFORMATION AT YOUR OWN RISK.

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