

Go Lithium

On-board Power Systems for Vehicle Conversions



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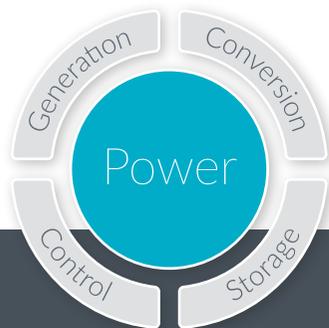
Power at your Control

At Energy Solutions we design, manufacture & supply complete power and monitoring systems for the marine, specialist vehicle and off grid markets. All these systems come with sophisticated control which can provide remote monitoring & operation giving complete peace of mind. Anywhere where you cannot “plug-in” to a traditional grid we can deliver a power system to meet your needs.



Hybrid power solutions are integral to many of our systems – the ability to drive up efficiency and bring down emissions is vital to customers and increasingly these solutions allow the integration of renewable energy alongside the storage capabilities of new generation batteries.

So whether you are interested in our standard product range or are looking for a bespoke solution we can help. All systems are delivered by our professional in-house teams, from initial briefing to final commissioning and on-going technical support. Our experience has made us a one-stop solution for customers – giving you a partner to rely on and come back to time and time again.



Highly Efficient On-board Power Systems for Vehicle Conversions

Powering on-board appliances, tools, media and amenities is a vital part of the design for specialist vehicle companies whose customers are looking to run increasing technology, work equipment and mobile comfort. Whether it is a recreational or commercial vehicle, efficient and effective power solutions help set a conversion apart.

Lithium Power Systems from £3,185



Energy Solutions have been the UK's number one Victron distributor since 2006.

Go Lithium

Why Lithium Ion?

Lithium battery systems provide a significant improvement on existing power technologies in a number of ways.

- The systems allow vehicle builders to provide more power from a smaller battery footprint meaning more space on-board and longer periods of power use
- Lithium batteries offer much greater efficiency – the battery can be recharged to 90% in just one to three hours* so the system can be brought back to full power ready for work.
- The batteries will last almost twice as long as a gel battery, so they will not need to be replaced as quickly, increasing the cost efficiency of the system.

We have developed four lithium battery systems for vehicles that will give owners freedom from mains power connection, deliver fast & efficient power and take up the least amount of space possible. The systems offer truly independent power that can easily be recharged from the engine or shore connection when needed.

Our systems have been designed to include all the elements a conversion will require; from battery & system monitoring to shore connection; the lithium batteries and the charger/inverter. However, if you do have specific requirements for a project we are able to work with you to adapt the systems to fit your exact needs.

**depending on system components*

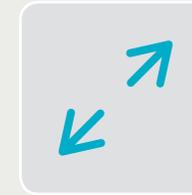
Lithium vs Gel Batteries

The numerous advantages of Lithium Ion battery technology include:



80%

lighter than gel batteries (for same useable capacity)



33%

less bulky
takes up a third less space



99%

efficient at converting charge
energy to charge source



longer service life
2000 - 3000 cycles



no sulphating - can be left
discharged without damage



low self-discharge rate

L1 System

Silent Power – Anywhere, Anytime

Ideal for smaller vehicles that wish to run key appliances, but do not want to lose important on-board space.

This system would power a small fridge, travel kettle, TV, radio and USB charging sockets all without the need for the engine to be on or any shore connection. This gives the option of complete freedom from hook up and silent power for users.

Standard L1 System Components

- Victron MultiPlus 12/1600
- BMV 712
- Victron 90Ah Lithium Batteries x 2
- Battery Management System
- Orion Buck Boost 12/24V 50 Amp
- 16 Amp shore inlet
- Color Control CCGX
- Fuses x 2
- Battery Isolator Switch

System Specifications

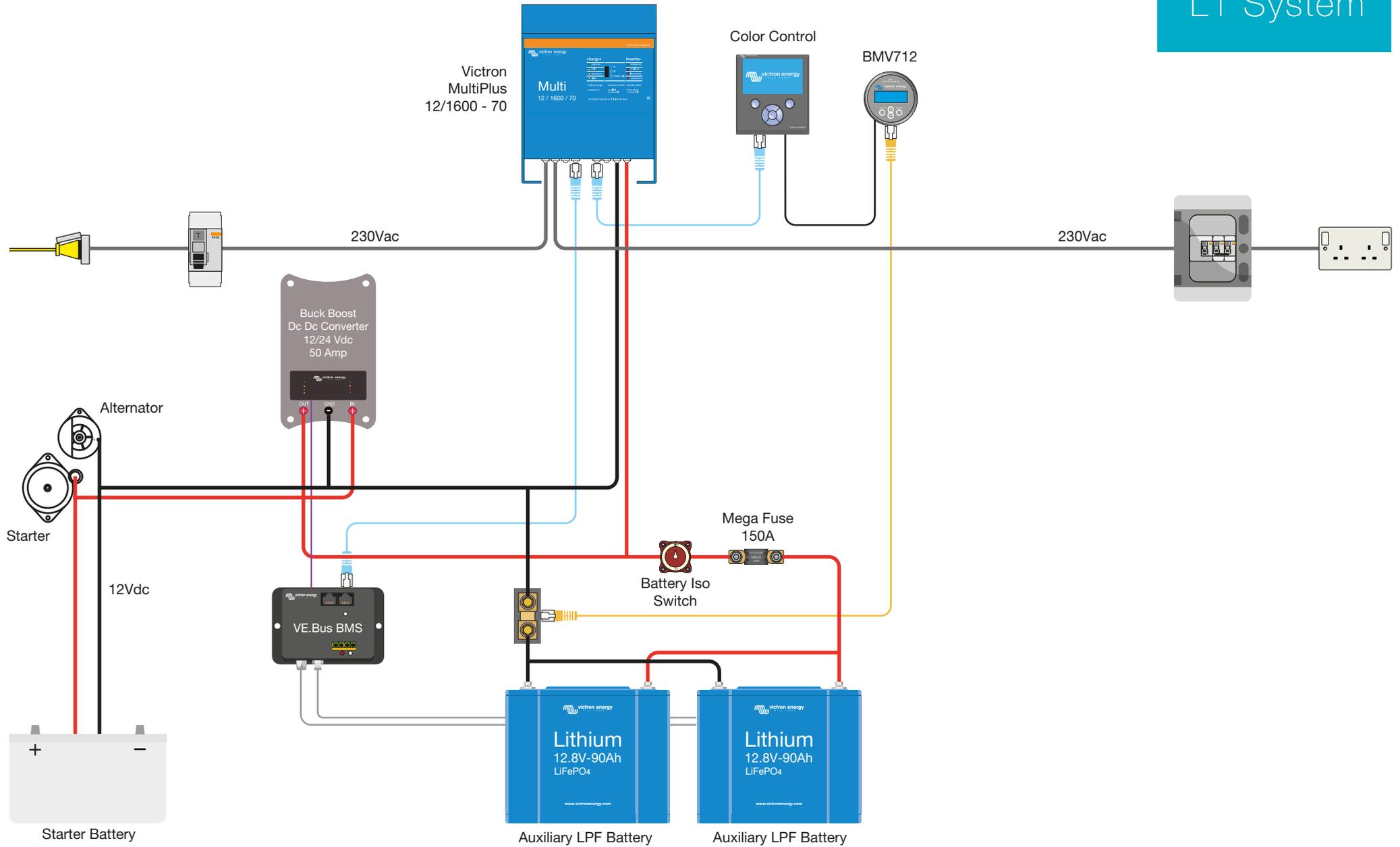
- AC loads up to 1200 Watts
- 2.16 kWh total battery storage – 1.7 kWh useable storage
- 16 Amp mains connection



Lithium vs Gel Batteries - weight saving and charge time saving



L1 System



This is a single line drawing and not an installation drawing, please follow manufacturer installation instructions and manuals at all times.

L1 System with Solar

Harnessing Renewable Power

Compact system that utilises solar power when available to charge the battery bank.

This system would power a small fridge, travel kettle, TV, radio and USB charging sockets all without the need for the engine to be on or any shore connection. This gives the option of complete freedom from hook up and silent power for users.

Standard L1 System with Solar Components

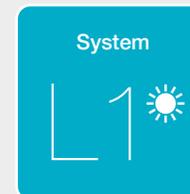
- Victron MultiPlus 12/1600
- BMV 712
- Victron 90Ah Lithium Batteries x 2
- Battery Management System
- Orion Buck Boost 12/24V 50 Amp
- 16 Amp shore inlet
- Color Control CCGX
- Fuses x 2
- Battery Isolator Switch
- Cyrix 12/24 120A
- Victron Bluesolar Monocrystalline Panel 30W 12V
- Victron Bluesolar Charge Controller 12/24V 15A MPPT 75/15

System Specifications

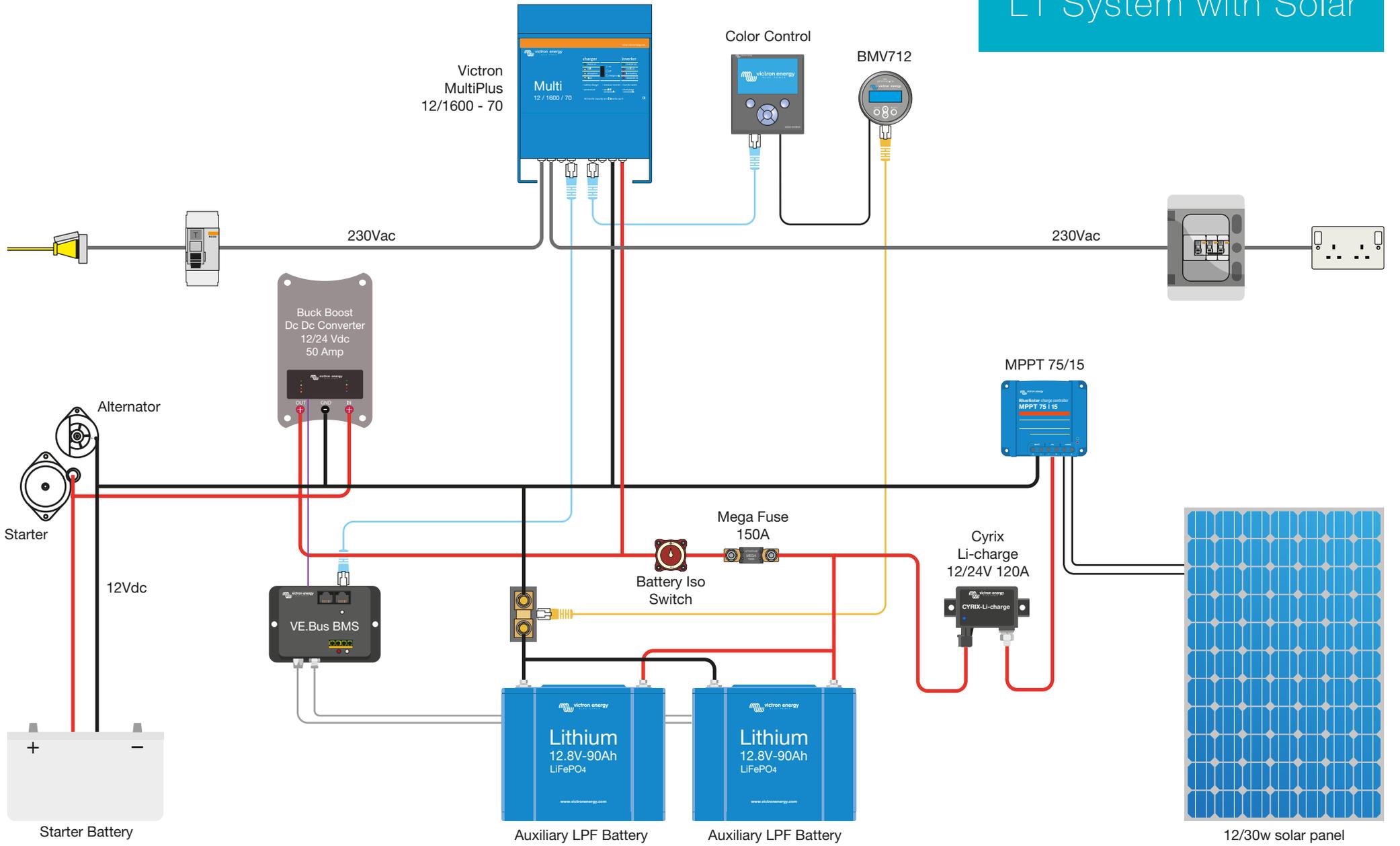
- AC loads up to 1200 Watts
- 2.16 kWh total battery storage – 1.7 kWh useable storage
- 16 Amp mains connection



Lithium vs Gel Batteries - weight saving and charge time saving



L1 System with Solar



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L2 System

Working Power on the Go

Ideal for commercial vans that need to run tools, appliances and equipment in any environment.

This system, whilst still compact in size, can power up working vans so they can operate in any environment where they can't plug in to a mains connection. This gives owners the ability to work in remote and unusual locations with plenty of power to finish the job.

Standard L2 System Components

- Victron MultiPlus 12/1600
- BMV 712
- Victron 200Ah Lithium Batteries x 2
- Battery Management System
- Orion Buck Boost 12/24V 50 Amp
- 16 Amp shore inlet
- Color Control CCGX
- Fuses x 2
- Battery Isolator Switch

System Specifications

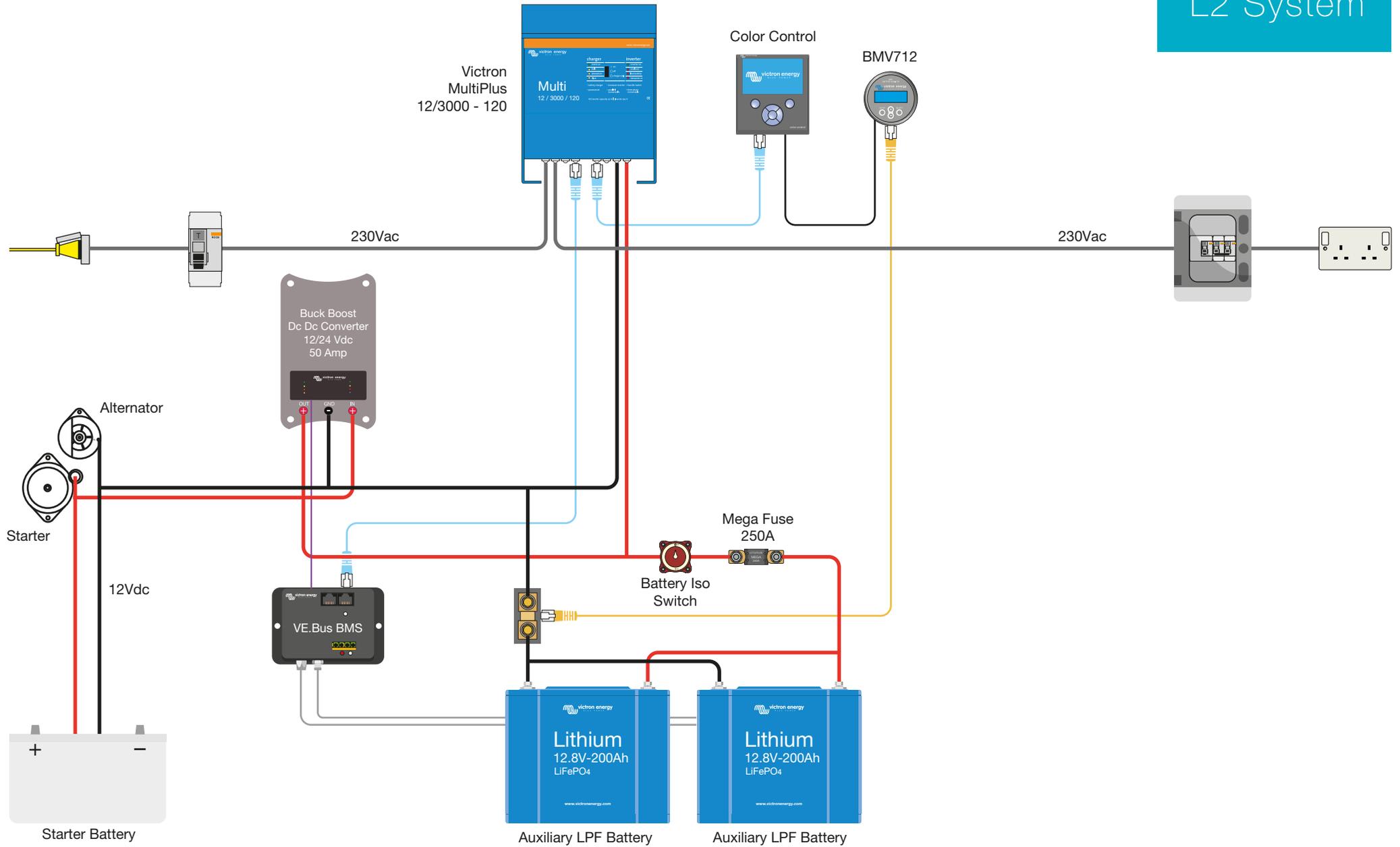
- AC loads up to 4000 Watts
- 4.8 kWh total battery storage – 3.8 kWh useable storage
- 16 Amp mains connection



Lithium vs Gel Batteries - weight saving and charge time saving



L2 System



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L3 System

Delivering Power for Comfort and Luxury

The largest of our systems the L3 boasts the largest battery bank and is designed to provide power for vehicles needing a wide range of on-board facilities and amenities. It is designed for vehicles such as large coaches, luxury horseboxes and remote working utility vehicles.

This system will power media systems, CCTV, fridge, freezer, kettle, small air conditioning, microwave cooking and tools. It also has the facility to be linked to an on-board generator to give additional power if needed.

Standard L3 System Components

- Victron Quattro 24/5000
- BMV 712
- Victron 300Ah Lithium Batteries x 2
- Battery Management System
- Orion Buck Boost 12/24V 50 Amp
- 32 Amp shore inlet
- Color Control CCGX
- Fuses x 2
- Battery Isolator Switch

System Specifications

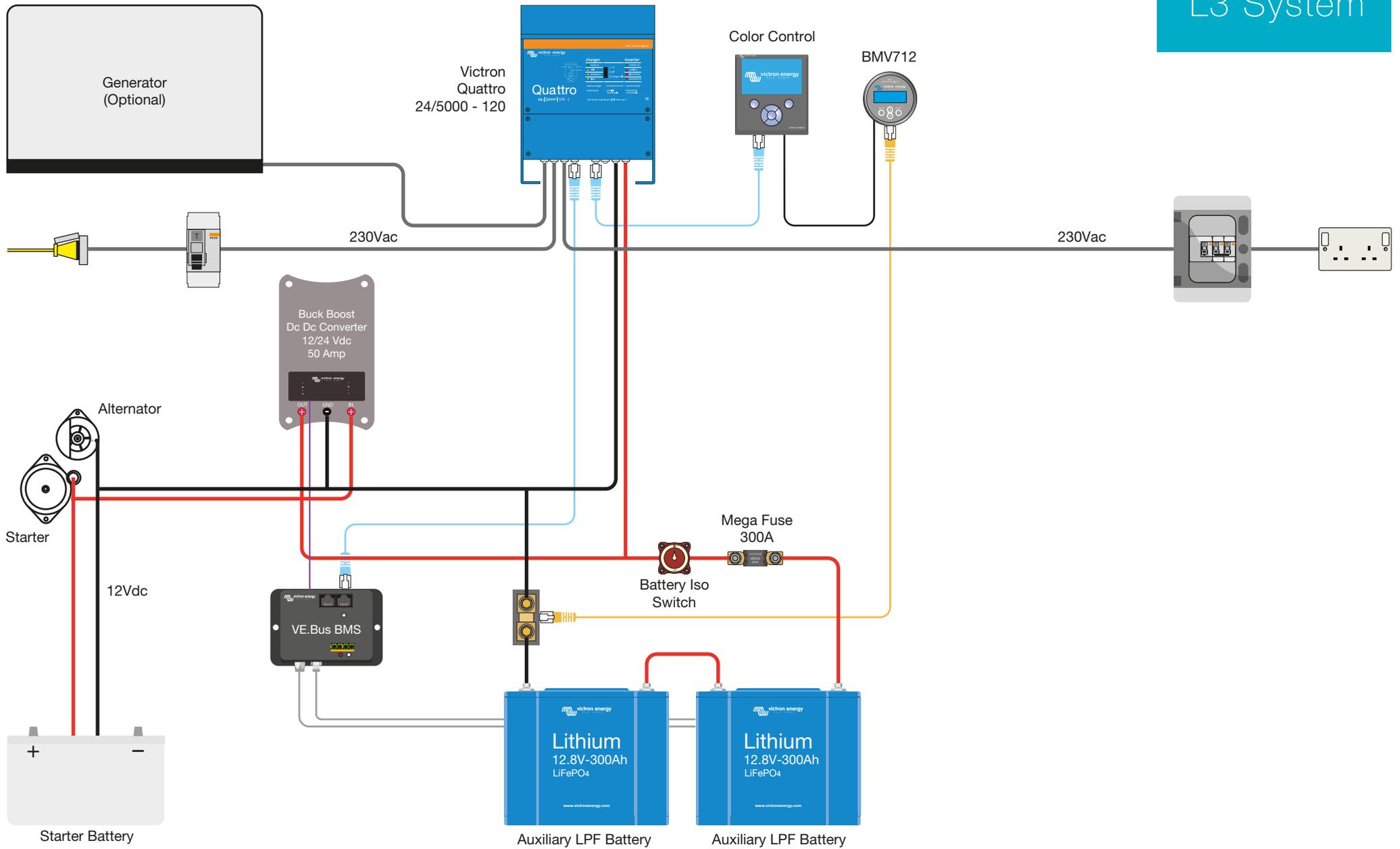
- AC loads up to 4000 Watts
- 7.2 kWh total battery storage – 5.5 kWh useable storage
- 32 Amp mains connection



Lithium vs Gel Batteries - weight saving and charge time saving



L3 System



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More information and
product videos

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