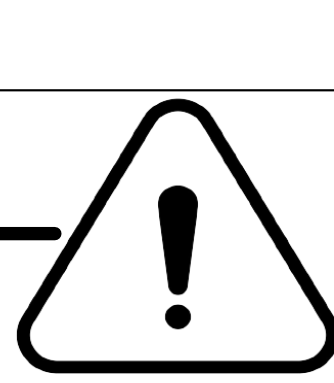


# PLEASE READ:



**Compulsory Reading**

All Cable & Fuse Sizes Based On Manual Stated Manufacturers Recommendations\*  
Torque Values Also Added Where Mentioned In Their Manuals\*  
**MUST Be Installed By a Skilled/Competent/Qualified Fitter**  
\*Every realization remains the responsibility of the fitter

**BS EN 1648-1:2018 5.3.4 Supporting of Cables Dictates:**

"Cables shall be supported at maximum intervals of 400mm for vertical runs. Horizontal runs, unless run in conduits or ducts, shall be secured at maximum intervals of 250mm"

**Recommended DC Cable Sizing**

0-5M Cable Length: 95mm<sup>2</sup> Cable length stands for the MAX distance between the battery plus and minus connections and the Inverter/Charger connections!

**Recommended AC-IN Cable/Breaker**

AC-IN MUST be protected by an MCB 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

**Compulsory Reading**

**ELECTRICAL SYSTEM MUST HAVE AN ELECTRICAL INSTALLATION CERTIFICATE (EIC) ISSUED PRIOR TO FIRST USE**

**WARNING**

230 VOLT IS EXTREMELY HAZARDOUS DO NOT TOUCH ANY LIVE WIRED PARTS OF THE INSTALLATION! WHEN IN DOUBT, ALWAYS CONSULT A SKILLED ELECTRICIAN!



RJ45 to be fitted into 1 of 2 (black) VE-Bus Ports  
Not to be confused with (metal) Ethernet Port

This diagram is intended to assist with installation and illustrate the connections that are required for operation.

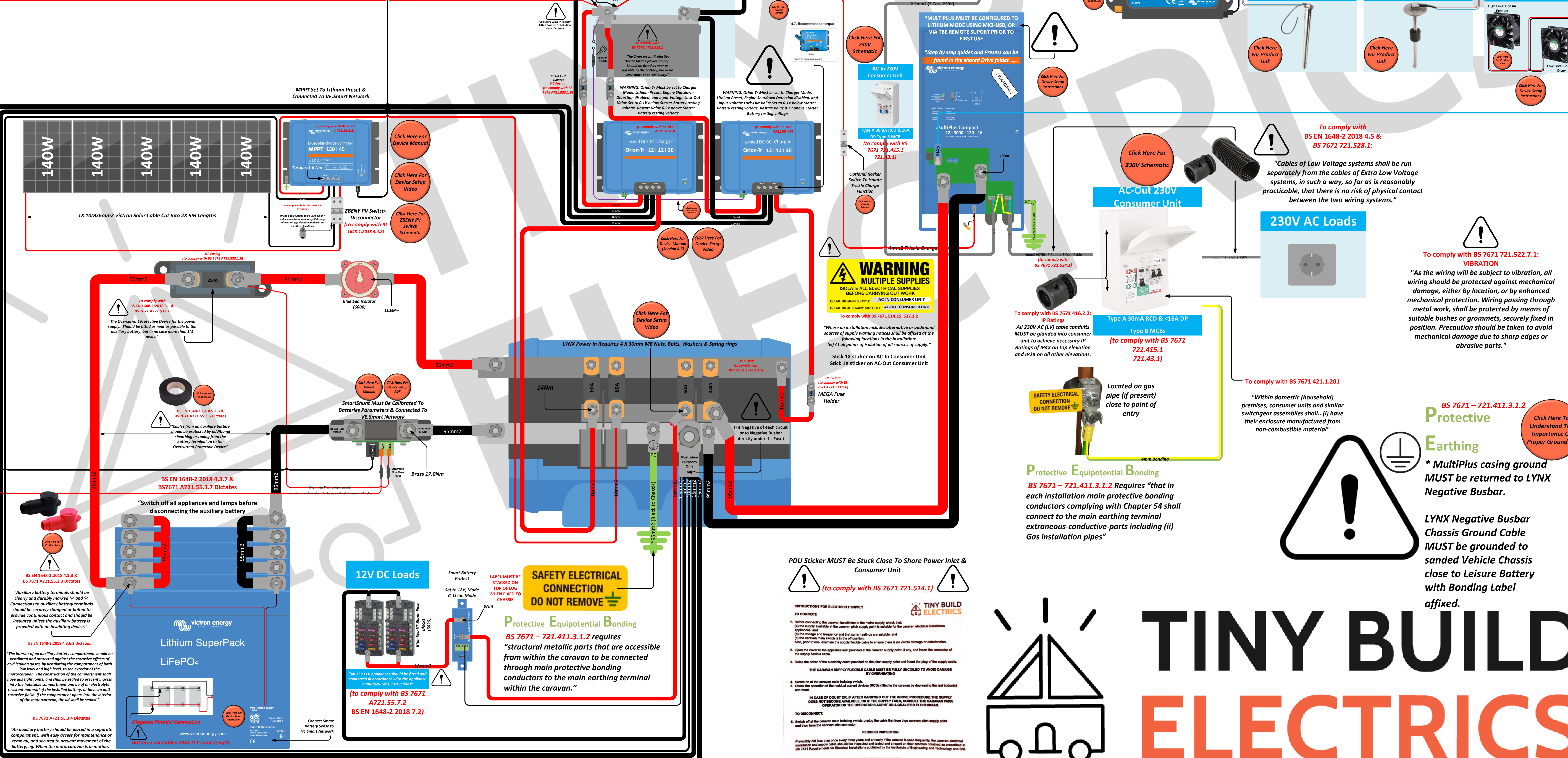
Installations must always be completed by a skilled person in accordance with manufacturers specifications, BS 7671, BS EN 1648-2 and on-site conditions.

Grounding requirements vary according to your region. Victron advises making an earth connection to all metal enclosures as shown in this diagram.

**Spacing & Ventilation**

"Mount vertically on a non-flammable surface, with the power terminals facing downwards. Observe a minimum clearance of 10cm under and above the product for optimal cooling."

Victron Energy



**PDU Sticker MUST Be Stuck Close To Shore Power Inlet & Consumer Unit**

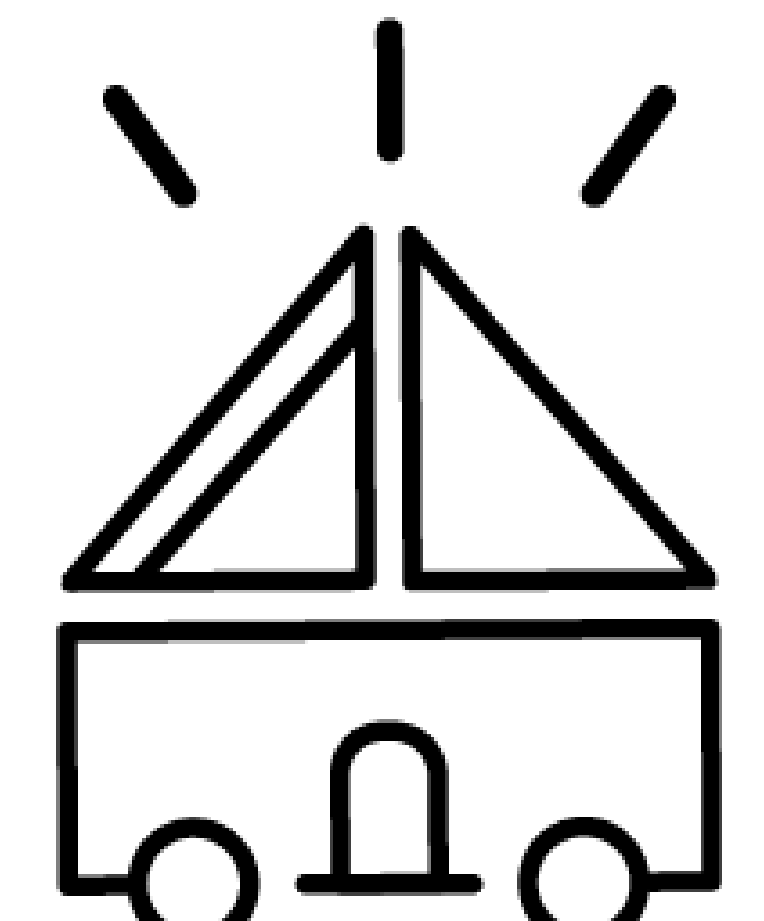
(to comply with BS 7671 721.514.1)

**INSTRUCTIONS FOR ELECTRICITY SUPPLY TO CONNECT:**

- Before connecting the caravan installation to the mains supply, check that:
  - (i) The supply voltage at the caravan plug supply point is suitable for the caravan electrical installation system, and
  - (ii) The voltage and frequency and that current ratings are suitable, and
  - (iii) The caravan main switch is in the off position.
 Also, prior to use, examine the supply flexible cable to ensure there is no visible damage or deterioration.
- Open the cover to the appliance inlet provided at the caravan supply point, if any, and insert the connector of the supply flexible cable.
- Raise the cover of the electricity cable provided on the plug supply point and insert the plug of the supply cable. THE CARAVAN SUPPLY FLEXIBLE CABLE MUST BE FULLY UNCOILED TO AVOID DAMAGE BY OVERHEATING.
- Switch on at the caravan main landing switch.
- Switch off the caravan main landing switch, unplug the cable from the plug supply point and shut from the caravan inlet connector.

**PERIODIC INSPECTION**

Periodically not less than once every three years and annually, if the caravan is used frequently, the caravan electrical installation and supply cables should be inspected and tested, and a report in that respect obtained as prescribed by BS 7671 Requirements for Electrical Installations published by the Institution of Engineering and Technology and BS.



# TINY BUILD ELECTRICS

Click Here To Understand The Importance Of Proper Grounding

BS 7671 - 721.411.3.1.2 Protective Earthing

\* MultiPlus casing ground MUST be returned to LYNX Negative Busbar.

LYNX Negative Busbar Chassis Ground Cable MUST be grounded to sanded Vehicle Chassis close to Leisure Battery with Bonding Label affixed.



"Within domestic (household) premises, consumer units and similar switchgear assemblies shall: (i) have their enclosure manufactured from non-combustible material"

To comply with BS EN 1648-2:2018 4.5 & BS 7671 721.528.1:

"Cables of Low Voltage systems shall be run separately from the cables of Extra Low Voltage systems, in such a way, so far as is reasonably practicable, that there is no risk of physical contact between the two wiring systems."

To comply with BS 7671 721.522.7.1: VIBRATION

"As the wiring will be subject to vibration, all wiring should be protected against mechanical damage, either by location, or by enhanced mechanical protection. Wiring passing through metal work, shall be protected by means of suitable bushes or grommets, securely fixed in position. Precaution should be taken to avoid mechanical damage due to sharp edges or abrasive parts."

To comply with BS 7671 416.2.2: IP Ratings

All 230V AC (LV) cable conduits must be glazed into consumer unit to achieve necessary IP Ratings of IP4X on top elevation and IP2X on all other elevations.

Type A 30mA RCD & <16A DP Type B MCBs (to comply with BS 7671 721.415.1 721.43.1)

Located on gas pipe (if present) close to point of entry

**Protective Equipotential Bonding**

BS 7671 - 721.411.3.1.2 Requires "that in each installation main protective bonding conductors complying with Chapter 54 shall connect to the main earthing terminal extraneous-conductive-parts including (ii) Gas installation pipes"

**12V DC Loads**

Smart Battery Protect Set to 12V, Mode C, Li-Ion Mode

LABEL MUST BE STACKED ON TOP OF LUG WHEN FIXED TO CHASSIS

**SAFETY ELECTRICAL CONNECTION DO NOT REMOVE**

**Protective Equipotential Bonding**

BS 7671 - 721.411.3.1.2 requires "structural metallic parts that are accessible from within the caravan to be connected through main protective bonding conductors to the main earthing terminal within the caravan."

(to comply with BS 7671 A721.55.7.2 BS EN 1648-2:2018 7.2)

**Lithium SuperPack LiFePO<sub>4</sub>**

Diagonal Parallel Connection

Battery Link Cables EXACTLY same length

Connect Smart Battery Sense to VE-Smart Network

BS EN 1648-2:2018 4.3.3 & BS 7671 A721.55.3.3 Dictates

"Auxiliary battery terminals should be clearly and durably marked '+' and '-'. Connections to auxiliary battery terminals should be securely clamped or bolted to provide continuous contact and should be insulated unless the auxiliary battery is provided with an insulating device."

BS EN 1648-2:2018 4.3.3.3 Dictates

"The interior of an auxiliary battery compartment should be ventilated and protected against the corrosive effects of acid leaking gases, by ventilating the compartment of both low level and high level, to the exterior of the motorcaravan. The construction of the compartment shall have gas tight joints, and shall be sealed to prevent ingress into the habitable compartment and be of an electrolyte resistant material of the installed battery, or have an anti-corrosive finish. If the compartment opens into the interior of the motorcaravan, the lid shall be sealed."

BS 7671 A721.55.3.4 Dictates

"An auxiliary battery should be placed in a separate compartment, with easy access for maintenance or removal, and secured to prevent movement of the battery, eg. When the motorcaravan is in motion."