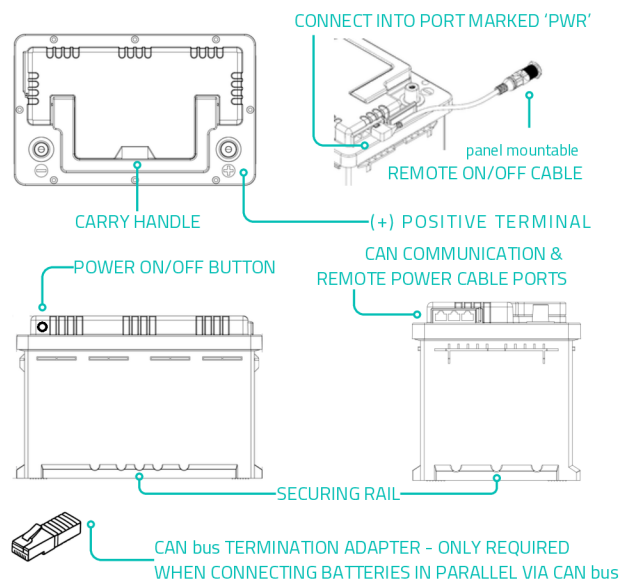


INTRODUCTION

This Quick Start Guide gives you the basics for getting set up with your new battery. For safety, the battery is shipped in hibernation mode. To activate the battery, press the power ON/OFF button located on the top edge of the battery. If the battery is inaccessible once installed, the optional Remote Power ON/OFF Cable can be used to control the battery, by connecting the optional cable to the port marked 'PWR' on the side of the battery after removing the rubber grommet. The remote button can be panel mounted for ease of access. This can also be used to put the battery in storage mode during winter or to isolate the battery during system maintenance. Connect the battery to a charger and fully charge it to 100%. See 'charging section' below. While waiting, download the latest version of Lithium Pro's SMARTiQ BMS App (Battery Monitoring System) from the Google Play Store or the App Store. By scanning the Appropriate QR code below you can download the App directly to your smart device.



⚠ SMARTiQ BMS App (You can download the App user manual by scanning the QR code on the battery)

Once downloaded, open the App and allow Bluetooth and Location Services permissions when prompted. The App will automatically scan for your battery. Tap the battery icon to connect your battery and you will be taken to the Dashboard to view the parameters of your battery. Once fully charged using a compatible LiFePO₄ charger the App will display 100% state of charge. The BMS will then synchronise the state-of-charge reading and your battery is now ready for installation.

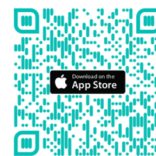
⚠ SAFETY INSTRUCTIONS

- Before using or installing the battery, carefully read this user guide and retain for future reference.
- Do not expose the battery to direct sunlight, extreme temperatures or water.
- Do not open the battery, as this will void the manufacturer's warranty.
- Do not short-circuit the battery.
- If storing the battery, do so in a well-ventilated area away from moisture and heat sources.
- For optimal performance and safety, it is recommended to use a LiFePO₄-compatible charger with a 14.4 V CC/CV charging profile.
- Do not crush, incinerate or modify the battery.
- Never mix brands of lithium batteries.
- Recycle the battery according to local regulations.



SMARTiQ

All SMART SERIES batteries have been designed to work with the SMARTiQ battery monitoring App. Using Bluetooth on a mobile device or tablet, you can view real-time information including voltage, state of charge, power, current and temperature, helping you monitor the health of your battery.



CHARGING PRIOR TO INSTALLATION

Before connecting your battery to the electrical system, fully charge the battery using a LiFePO₄ compatible charger set to a 14.4 V CC/CV charging profile. Lithium batteries perform best with CCCV (Constant Current, Constant Voltage) charging protocol. Ensure all your charging sources are set to Lithium (LiFePO₄). If your charger does not have a LiFePO₄ setting, select a profile with a bulk/absorption voltage of 14.2–14.6V (Optimal: 14.4V) and a float voltage of 13.5V. LithiumPro batteries support high charging currents, but for maximum lifespan, we recommend charging at ≤0.5C (e.g. ≤50A for a 100Ah battery).

ALTERNATOR CHARGING

If the battery is charged from a vehicle alternator, a suitable DC-DC charger should be installed to regulate the charging current, voltage and optimise charging performance and battery life. This is particularly important on vehicles fitted with Euro 5 or Euro 6 smart alternators or stop-start technology. Some leisure vehicles may already have a DC-DC charger installed, so confirm the existing charging system before fitting an additional unit. Split charge relays are not suitable for use with Lithium batteries as they do not shutdown charging when leisure battery bank is fully charged.

INSTALLATION

Determine a suitable location for the battery. The battery may be installed upright, on its side or on its end, but it must not be mounted with the terminals facing down. Securely mount the battery so that it cannot move in the event of an impact. Install the battery in a dry, well-ventilated area, away from moisture and heat sources. Do not install battery within an engine bay. TIP: For additional safety, consider installing a suitable heat detector near the battery location.

CONNECTION

⚠ WARNING: Before making any connections, always ensure that the battery is switched OFF and all loads, chargers and inverter are also switched OFF or isolated. Only use high-quality, multi-stranded copper cables with a suitable cross-sectional area for your system requirements. Connect the positive (+) cable first and the negative (-) cable last to reduce the risk of accidental short circuit when first connecting battery. When disconnecting the battery reverse this sequence.

NOTE: Battery terminal connections must be tightened to a torque of 12Nm using a torque wrench.

NOTE: A maximum of 2 cable lugs can only be connect to each battery terminal. Where multiple connections are required, connections should be made via a suitably rated busbar. Always use terminal covers to reduce the risk of short circuits.

FUSING: It is essential to install a high-quality correctly rated DC fuse to each battery in the positive cable. It should be as close to the positive battery terminal as practicable, or directly on the positive terminal to protect against short circuits and catastrophic battery faults. The primary battery fuse must have a DC interrupt capacity of at least 5kA at 14V DC for the ULTRAVOLT battery.

⚠ WARNING: Prior to connecting an inverter to the battery, verify the Battery Management System's (BMS) continuous current rating is compatible with the inverters power output. The ULTRAVOLT V2 has a 160A continuous-discharge rated BMS and is suitable for use with inverters rated up to 2,000W.

The SMARTCORE SERIES has a built-in pre-charge safety function that reduces dangerous inrush current when equipment such as an inverter is energised. This helps reduce arcing, sparking and electrical stress on the BMS during start-up.

SERIES & PARALLEL CONNECTIONS

⚠ WARNING: Never connect Lithium batteries of different brands, models or capacities. Different batteries may use different Battery Management Systems (BMS) and protection logic. Mismatching can cause conflicts in operational control, imbalances in charging or discharging, which may potentially lead to overheating and premature failure. **NOTE:** Always fully charge each battery separately before connecting them in series or parallel. LithiumPro batteries can be configured as follows:

- In SERIES to increase voltage to 24V, 36V, or a maximum of 48V. (maximum 4 in series)
- In PARALLEL up to a maximum of 8 batteries.

For SERIES configuration, ensure that the terminal voltage of each battery is within 0.05V of the others to prevent imbalances. For PARALLEL configurations, connect positive terminal of battery A to loads and negative terminal to battery B. Use cables that are as short as possible and identical in length. If connecting more than 2 batteries in parallel use a busbar configuration.

CAN BUS COMMUNICATIONS (Additional SMARTCOMM SERIES cable is required to enable CAN communications)

To enable CAN bus communications a SMARTCOMM SERIES cable is required. If linking batteries in parallel via CAN bus a standard RJ45 patch cable can be used. Ensure the last battery in the chain is terminated with the Termination Adapter. For Victron GX integration, connect the battery to the CAN-bus port and set data speed to LV (500 kbit/s).

PERFORMANCE, MAINTENANCE & STORAGE

Lithium batteries require minimal maintenance at regular intervals, ensure terminals are clean, free from corrosion, and that battery terminal connections are securely tightened to a torque of 12Nm using the supplied bolt. Always monitor the battery's performance, voltage, temperature, and capacity levels during usage to ensure it operates within specification. The built-in Battery Management System (BMS) safeguards the battery by protecting against overcharging, reversed polarity, short circuit, deep discharging, extreme temperatures, and many other critical conditions. NOTE: operating the battery outside the manufacturer's recommended guidelines — such as charging or discharging in very hot or cold conditions, or at high current (C-rates) — may reduce its lifespan.

All Lithium Iron Phosphate batteries should be stored in a cool, dry, well-ventilated environment. Avoid any exposure to direct sunlight or heat sources. If storing your Lithium battery for an extended period, it should be isolated from all loads using the onboard power ON/OFF switch or disconnected from the system completely and left at a storage charge level between 60-80%.

ADVISORY: Do not leave your battery on charge for prolonged periods when not in use. LithiumPro batteries do not need to be permanently float charged or kept at 100% State of Charge (SOC). Lithium batteries have low self-discharge rates compared with lead-acid chemistries, so do not require permanent trickle charging from shore power or solar. If your battery is subject to extended periods of non-use, charge to 60-80% and switch battery off. Check the battery's SOC every three months and charge as necessary.

SUPPORT & WARRANTY ACTIVATION

For further technical information and FAQs, visit www.lithiumpro.co.uk/qr. To activate your 5 year warranty please complete the warranty activation form at: <https://www.lithiumpro.co.uk/warranty-activation>