



**ULTIMATRON  
FRANCE**

# **Installation - Operation - Maintenance Manual**



**ULP series**

**Waterproof Portable LiFePO4 Battery**

## 1. Safety precautions and warnings

### 1.1 Scope of Application & Personnel Restrictions

- **Personnel restrictions:** Battery installation and wiring must be performed by qualified professionals.
- **Recommended applications:** Specifically designed as a power supply for recreation, water sports (such as light propulsion systems and trolling motors), and non-critical static equipment.
- **Prohibited applications:** for use as a starter battery for internal combustion engines (e.g., cars and outboard motors). It must not be used for critical medical equipment without a comprehensive risk assessment.

### 1.2 Installation & Electrical Safety

- **Power-Off operation:** Disconnect or shut off all power sources before installation. Ensure all wiring terminals are securely tightened.
- **No mixing, series, or parallel connections:** Connecting the battery in series or parallel is not allowed.
- **Electrical violations prohibited:** Never reverse the positive and negative polarity, short-circuit, overcharge, over-discharge, or subject the battery to over-current.

### 1.3 Operating Environment & Dust/Water Resistance

- **Environmental requirements:** Install in a dry, well-ventilated area free of flammable, explosive, or corrosive gases.
- **Dust & Water resistance limitations (IP65):** The battery is dust-proof and splash-proof ONLY when external connection ports are properly closed without structural damage. Prolonged heavy rain complete submersion will destroy the protective seal, leading to short circuits, permanent damage, and serious safety hazards.

### 1.4 Charging/Discharging & Temperature Management

- **Operating temperature:** Charging: 0°C to 55°C; Discharging: -20°C to 60°C.
- **Thermal management:** Keep away from heat sources. Please DO NOT throw the battery into fire, place it in high-temperature environments, or expose it to prolonged direct sunlight.
- **Charging requirements:** Use only the dedicated LiFePO<sub>4</sub> (Lithium Iron Phosphate) charger that complies with the battery's specifications.

### 1.5 Physical Protection, Transport & Prohibited Actions

- **No unauthorized modifications:** Never modify the battery, desolder/reprogram the BMS (Battery Management System), or replace internal individual cells.
- **Prevent physical damage:** Never disassemble, crush, or puncture the battery. Stop using it immediately if it becomes damaged or deformed.
- **Safe transport & handling:** Transportation of the battery cases should be done packed in the original packaging or a packaging suitable to protect against the shock of falling. Make sure the batteries are fixed properly during transport to prevent shifting of the load.
- **Avoid mechanical shocks:** Avoid drops, knocks, and mechanical shocks at all times.

## 1.6 Emergency & Fire Safety

- **Fire extinguishing limitations:** If the battery catches fire, use ONLY a dry powder fire extinguisher.
- **Chemical hazards:** In case of accidental contact with leaked substances, immediately rinse with clean water and seek medical attention.

# 2. Operating Instructions

## 2.1 QUICK START

### ACTIVATING THE ULP BATTERY

- Open the lid of your ULP battery and press the power button and the button will light up when the battery is on and ready for use.

### INSTALL AND CONNECT THE ULTIMATRON APP

- Review and follow the instructions in the Ultimatron App section to install the app on your smartphone and connect your ULP battery.

### CHARGE YOUR ULP BATTERY

- For plug-and-play charging, connect the charger to the product using either the Anderson SB50 connector or the M8 terminals, plug the charger into an AC outlet, and switch it on.
- You can monitor the charge status via the Ultimatron App.

### READY FOR USE

- Your ULP battery is now ready to power your trolling motor, fish finder, or other devices.

## 2.2 Installation Guidelines

- **Mounting and placement:** Securely fasten the battery. Leave adequate ventilation clearance. DO NOT place heavy objects on it, puncture it, crush it, or apply excessive pressure.
- **Wiring requirements:** During installation, connect the positive terminal first, then the negative. During uninstallation, disconnect the negative terminal first, then the positive. Install appropriate fuses or circuit breakers. This battery does NOT support series or parallel connection.
- **BMS protection board:** Use only the original factory-fitted BMS. DO NOT remove, modify, or tamper with the BMS. Charging and discharging without a functioning BMS will result in battery failure.

## 2.3 Charging Operation Guidelines

- **Use dedicated charger:** Use a charger specifically designed for LiFePO4 batteries with matching voltage:
  - 12V system: 14.4–14.6 V
  - 24V system: 28.8–29.2 V
  - 36V/38.4V system: 43.2–43.8 V
  - 48V system: 57.6–58.4 V
- **Charging conditions:** Never charge below 0°C. Charge in a well-ventilated area. Do not leave charging unattended for extended periods. If any abnormality occurs, disconnect the power immediately and move the battery to a safe location.
- **State of charge:** Disconnect immediately once fully charged. For long-term storage, maintain 50%–80% charge. Never store fully charged or deeply discharged.

## 2.4 Discharging & Usage Guidelines

- **Avoid deep discharge:** Do not let the battery drop below 20% SOC. Never attempt to forcibly reactivate after excessive discharge. Disconnect power promptly when it is not in use.
- **Power limits:** Do not exceed the rated continuous or peak discharge current.
- **Emergency shutdown:** If the battery shows swelling, leakage, excessive heat, unusual odor, or any other abnormality, immediately stop use and disconnect power.

## 2.5 Routine Maintenance & Care

- **Regular inspection:** Check the terminals, casing, and voltage every month for any anomalies.
- **Cleaning:** Wipe with a dry cloth only and avoid critical areas (terminals, vents, etc.). Never wash with water or use high-pressure water.
- **Long-term storage:** Store in a dry location at 0–25°C. Charge the battery back to 50%–80% SOC every 2–3 months.

## 2.6 BATTERY MANAGEMENT SYSTEM (BMS)

### • Core BMS Protection Features

**Deep Discharge Protection:** Prevents battery voltage from dropping below critical levels to avoid irreversible damage.

**Overcharge Protection:** Automatically stops the charging process reaching the maximum voltage.

**Cell Balancing:** Maintains uniform voltage across all cells to maximize efficiency and extend battery lifespan.

### • Automatic Shutdown & Restart Procedures

**Status Monitoring:** Automatically shuts down when safety thresholds are exceeded; specific fault codes can be viewed via the Ultimatron App.

**Standard Restart:** Disconnect all external devices, resolve the underlying issue, and press the power button to reactivate the battery.

**System Reset:** If a standard restart fails, turn the power on and connect the battery to a charger to reset the system.

### • Abnormal Warnings & Corrective Actions

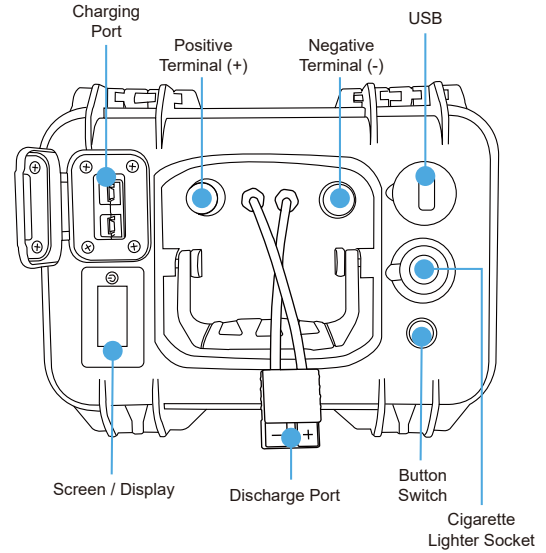
**Causes of Repeated Shutdowns:** Usually indicates a malfunction in connected equipment, environmental overheating, or improper use outside of specifications.

**Immediate Action:** Stop using the ULP battery immediately and utilize the App to troubleshoot the root cause.

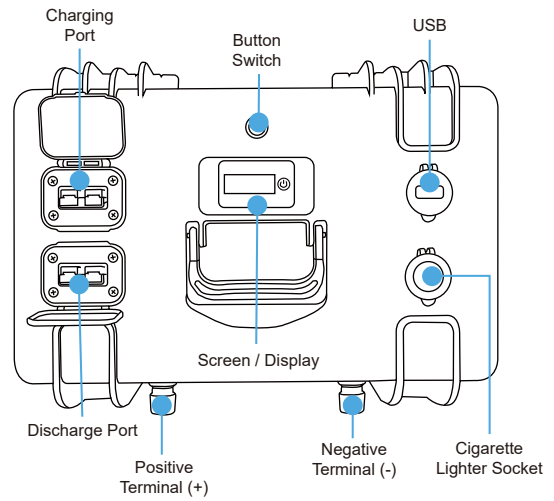
**Tech Support:** If the problem persists, contact Ultimatron support or your installer for further assistance.

## 2.7 Battery Interface Definition

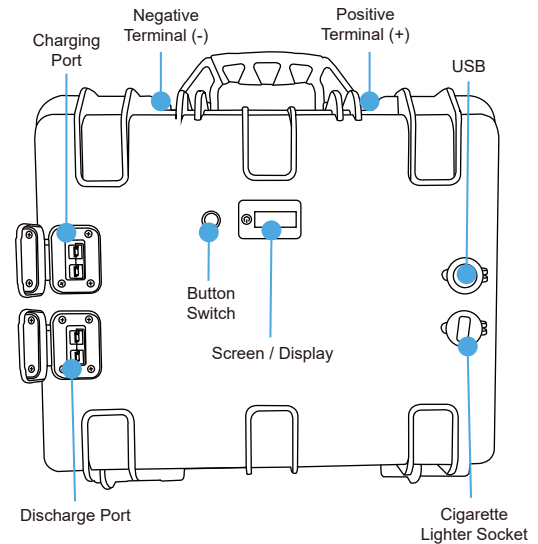
### ULP-12-100 & ULP-24-50



### ULP-12-150 & ULP-12-280 & ULP-24-100



### ULP-36-100



### **Anderson Ports (Charging & Discharging)**

**Connector: Anderson SB 50A** (Max current: 50A).

Charging Port: Compatible with original and other Anderson LiFePO4 chargers.

Discharge Port: Quick-connect design. Ideal for fish finders and electric outboard motors (<50A).

### **Main Terminals (Positive & Negative)**

**Specifications: M8 Bolt Terminals.**

Max Input/Output: 50A–200A (Model dependent—refer to specs; do not exceed the rated limit).

Compatibility: Supports Ring Terminal LiFePO4 chargers and electric outboard motors.

### **Charging Guidelines (Recommended 0.2C–0.5C)**

To ensure optimal battery longevity, please use the recommended charging currents below.

**IMPORTANT:** The Anderson Charging Port has a strict 50A limit. If your charging current exceeds 50A, you must use the M8 Main Terminals.

**50Ah Battery:** 10A – 25A

**100Ah Battery:** 20A – 50A

**150Ah Battery:** 30A – 75A (Use M8 Terminals if charging over 50A)

**280Ah Battery:** 56A – 140A (Must use M8 Terminals)

### **USB Ports:**

Equipped with 2× USB-A and 1× USB-C (Type-C) ports.

- USB-A outputs: 36W and 66W (max)
- USB-C + 1× USB-A share a 36W power line
- 1× USB-A (66W) has a dedicated line

### **Notes:**

Actual output depends on the device being charged.

The USB ports are for discharge only and cannot be used to charge the battery. Suitable for phones, tablets, and other low-power devices.

### **Cigarette Lighter Socket:**

Standard Cigarette Lighter Socket with a 12V 10A regulated output. Suitable for powering fish finders, chart plotters, and similar devices under the corresponding power.

### **Button Switch:**

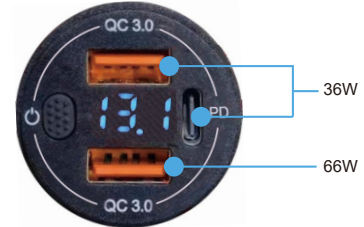
Physical power switch of the battery. Press to connect/disconnect the power.

### **Display:**

LCD color screen showing battery level (percentage and bar), real-time voltage, current, and battery temperature.

### **Important Notes:**

1. Do NOT use the Anderson SB 50A ports (charging/discharging) and the M8 terminals simultaneously for charging/discharging. This may cause overload, equipment failure, permanent battery damage, or even fire/electrical hazards. For your safety, please follow and prioritize this rule under any circumstances.
2. Ensure all connections are correct and secure. Loose or poor connections may cause overheating or short circuits.
3. All operations must follow this guideline and the technical specifications sheet. Any damage or accidents caused by improper use will result in the user's own responsibility.
4. If unsure about proper usage, please reference to the technical specifications sheet or contact our customer support. Do NOT operate without proper guidance.



Model	ULP-12-100	ULP-12-150	ULP-12-280	ULP-24-50	ULP-24-100	ULP-36-100
Nominal voltage	12.8V			25.6V		38.4V
Nominal Capacity	100Ah (C5,25°C)	150Ah (C5,25°C)	280Ah (C5,25°C)	50Ah (C5,25°C)	100Ah (C5,25°C)	100Ah (C5,25°C)
Energy	1280Wh	1920Wh	3584Wh	1280Wh	2560Wh	3840Wh
Cycle Life	≥6000 cycles (80% DOD)					
Charge Mode	0.2C to 14.6V, then 14.6V, charge to current till 0.02C(CC/CV)			0.2C to 29.2V, then 29.2V, charge to current till 0.02C(CC/CV)		0.2C to 43.8V, then 43.8V, charge to current till 0.02C(CC/CV)
Recommended Charge Current	20A	30A	56A	10A	20A	20A
Max Charge Current	100A	150A	200A	50A	100A	100A
Recommend Discharge Current	20A	30A	56A	10A	20A	20A
Max Discharge Current	100A	150A	200A	50A	100A	100A
Discharge Cut-off Voltage	10.6V			21.2V		31.8V
Charge Temperature	0 - 45°C					
Discharge Temperature	-20 - 60°C					
Storage Temperature	0 - 40°C					
Ingress Protection	IP65					
Material of Case	ABS/PP					
Dimensions (mm.)	286*220*263	406*280*270	406*280*270	286*220*263	406*280*270	479*415*217
Weight (kg.)	11.2	18.2	29.2	12.2	22.4	32.6
Terminal	Anderson/M8					

### 3. Battery Settings and Configuration via Bluetooth

#### Download

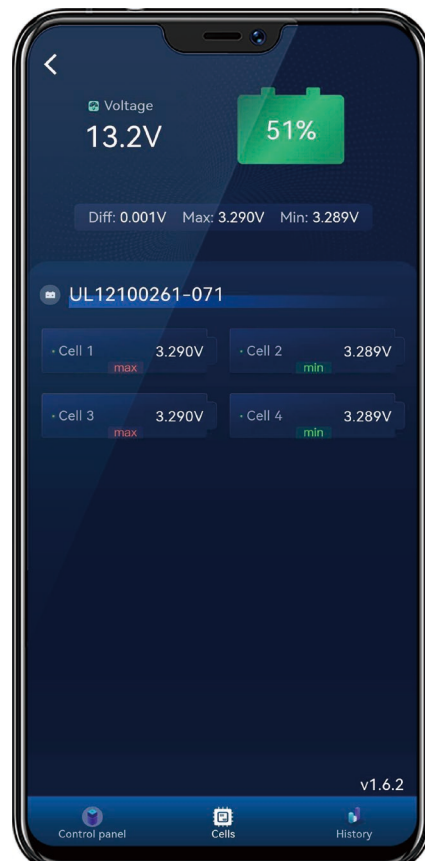
Scan the QR code with your phone to download the mobile app. The system will automatically redirect you to the App Store (for iOS/Apple devices) or Google Play (for Android devices).



#### Connection

After successfully downloading and installing the app, open the app on your smartphone. For first-time use, enable Bluetooth on your phone.

Search for the battery's number (or device ID), then turn on the Bluetooth connection switch to pair and connect to the battery.



## 4. Warranty



The warranty period is five years for the Waterproof Portable LiFePO4 Battery.

### Warranty Terms

The warranty applies to normal use according to this manual and within the specifications. Warranty is only provided if the purchase receipt can be submitted. The warranty does not extend beyond repair or replacement of the delivered goods. Consequential damage is expressly excluded. In all cases where the warranty terms are unclear, an attempt will be made to resolve complaints reasonably. This is within the provisions of liability.

### Liability

Outside the warranty provided by ULTIMATRON FRANCE on the product, ULTIMATRON FRANCE accepts no liability whatsoever. Only direct damage will be compensated in applicable cases. Consequential damage such as loss of profit and personal injury is excluded. The buyer must take all necessary measures to prevent damage. If ULTIMATRON FRANCE is liable for damages suffered, the obligation to compensate is limited to the maximum amount paid out by the insurers. If the damage is not covered by insurance, the compensation will be at most the invoice amount. Liability and the right to warranty are in any case excluded in the event of:

- External disasters such as lightning strikes
- Use of an unsuitable charger
- Repairs carried out by third parties or modifications made to the product
- Use of the battery if water has (possibly) penetrated the housing
- Use of the battery if defects are visible or detected (such as deformation due to heat, a burning smell, loose parts, etc.)