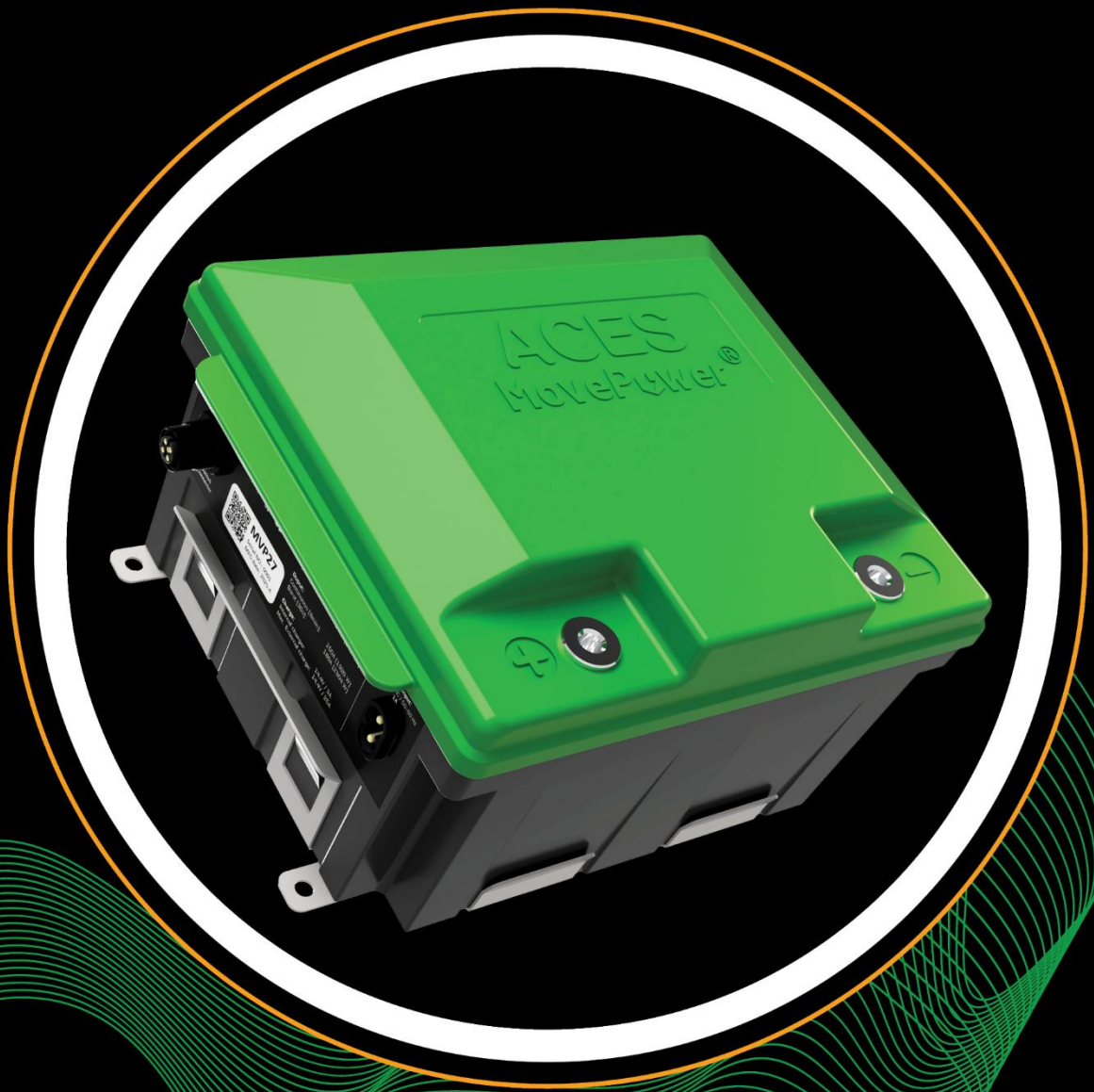
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ACES ENERGY SP

The ace in powerful and compact energy



User Manual

Lightweight, powerful. Ready for your adventures

MovePower® The ultimate LiFePO4 Mover battery from ACES Energy – for caravans and trailers.

1 Introduction

Please read this manual carefully before using your MVP27 battery. Our goal is for you to have a long lasting battery, with which the information in this user manual can aid.

This MVP27 is completely designed and engineered in the Netherlands and uses the highest quality components. It has special high-power LiFePO4 technology, a smart Battery Management System (BMS) and an internal charger. This ensures that even the heaviest and most powerful movers can be used with this battery, while also providing maintenance and worry-free experience.

The BMS ensures that the battery protects itself off when it gets outside of its safe operating voltage, current or temperature. Next to this is also ensures optimal battery life by its balancing functionality, which makes sure that all battery cells get fully charged and able to deliver their maximum power. Data monitored by the BMS can also be accessed using the ACES Energy app.

2 Box contents

- 1 × MVP27 Mover Battery Unit
- 1 × Mounting Bracket Assembly
- 1 × Power Switch with 2.0 m Connection Cable
- 1 × AC Power Cord (for integrated battery charger), 1.2 m length with EU plug
- 1 × Set of (DIN-compliant) Battery Terminals (Thick+ and Thin -)
- 2 × M8 Terminal Screws (for pole connection)
- 1 x set of pole isolation boots
- 1 x User Manual

3 Safety Instructions

Maximum Power, Minimal Weight

Experience full traction without additional ballast. Our LiFePO4 mover battery weighs up to 80% less than a comparable lead-acid battery while delivering the high peak current required by your mover, even on inclines or wet grass. The constant voltage output ensures consistent performance until the battery is fully depleted.

Easy and Quick Installation

Experience full traction without additional ballast. Our LiFePO4 mover battery weighs up to 80% less than a lead-acid battery, yet effortlessly delivers the high peak current your mover requires, even on slopes or wet grass. The constant voltage output ensures consistent performance until the battery is fully depleted.

Advanced BMS for Safety and Reliability

The integrated Battery Management System (BMS) continuously monitors and balances each cell. This guarantees maximum safety, optimal performance, and extended cycle life. Each battery undergoes individual testing for capacity, cell balance, and safety prior to shipment.

Always Informed with Bluetooth Connectivity

The integrated Battery Management System (BMS) continuously monitors and balances each cell. This ensures maximum safety, optimal performance, and extended cycle life. Each battery is individually tested for capacity, cell balance, and safety prior to delivery.

4 Specifications

ELECTRICAL	
Voltage Category	12V
Nominal Voltage	12.8V
Capacity @ 0.2C	Min. 26 Ah, nominal 27 Ah
Nominal Energy @ 0.2C	346 Wh
Operational Voltage range	10-14.6V
Capacity vs. Ambient Temperature @0.2C	See figure 3
Self-Discharge rate	<3%/month; <15%/year
Internal Fuse	No
Cycle Life at 80% DOD and 1C (See figure 3)	2500
Parallel Connection	Up to 4 batteries
Series Connection	Not allowed
Communication Interface	Bluetooth
DISCHARGE	
Maximum Continuous Current down to 20% SOC	150 A (1920 W)
Maximum Surge/Peak Current (for 5 seconds)	200 A (2560 W)
Max. Discharge Current Protection (after 30 seconds)	180 A (2304 W)
Over discharge Protection level	10 V
Recommended Discharge-End Voltage	11.2 V
Fast Short Circuit Protection	Yes
CHARGE	
Maximum Charge Current (10-90%)	20 A
Recommended max. Charge Current	12 A
Maximum Charge Voltage (to 100%)	14.6 V
Float Voltage	13.6-13.8V
Charging Characteristic	CC/CV
Recommended ACES Charger	Internal charger: 14.4 V, 3 A
MECHANICAL	
Dimensions (L x W x H); see drawing	229 x 186 x 126 mm
Weight	4.1 kg (including mounting frame)
Cell Type	Prismatic
Terminal size, torque, cable cross section	M8 ; 8-12 nm; recommended cross section ≥25mm2 DIN battery terminals
ENVIRONMENTAL	
Discharge Operation Temperature and %RH	-20°C – 60°C; 5% – 85% RH (see figure 1)
Charge Operation Temperature and %RH	0°C – 50°C; 5% – 85% RH (see figure 2)
Storage Temperature	Up to 2 months -10°C – 40°C; Up to 6 months 0°C – 30°C
Storage Recommendation	5°C – 30°C; 5% – 75% RH
Operation Altitude	< 3000m
Protection IP Class	IP65
EAN Number	4738476960295
Certifications	Battery: UN38.3, CE, MSDS Charger: UL,FCC,GS,CE,ROHS

Note 1: *All performances are at 25°C temperature unless otherwise stated*

5 Usage Instructions

Before operating the battery, carefully read the user manual and technical specifications. Always fully charge the battery after each use. Leaving a nearly discharged battery unused for a long period can cause capacity loss and deep discharge, which may permanently damage the cells and is not covered by warranty.

It is recommended not to discharge the battery below 20% SOC (State of Charge) or below the specified voltage. An undervoltage protection level should be set within the connected application.

If the battery will not be used for more than one month, charge it to 50–80%(up to 100% also okay) SOC and store it at an ambient temperature between 5 °C and 30 °C. Disconnect or switch off the positive terminal to prevent deep discharge. During extended storage, check the SOC via the app at least every three months.

Regularly charge the battery to 100% to maintain accurate SOC readings and prevent cell imbalance.

For electrical connections, use M8 screws and cable lugs with 8 mm holes, tightened to a torque of approximately 8–10 Nm. Otherwise, the included DIN battery terminals can be used. Loose connections may cause overheating of cables and terminals. Ensure the cable cross-section is appropriate for the maximum continuous current, and use suitable cable boots for insulation.

6 Switch Operation

The built-in switch controls the battery's discharge — it simply turns the battery ON or OFF.
When the battery is not in use for an extended period, it must be **powered off completely**. This prevents unnecessary discharge and helps to extend the battery's service life. Ensure that the battery is stored according to the recommended storage conditions specified in this document.

Battery state	How to activate	Colour indication
Turn **ON** for 1 hour	Press & hold the button **1** second	
Turn **ON** without time limit	Press & hold the button **3** seconds	
Turn **OFF**	Press the button (when the battery is on)	