



# OlenBox series



olenergies

## TECHNICAL SHEET



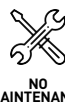
ULTRA COMPACT



LIGHT WEIGHT



DESIGNED TO ENDURE



NO MAINTENANCE



USABLE IN ALL DIRECTIONS



UNLIMITED ASSEMBLY

WARRANTY 5 YEARS

#1 WORLD RECORD  
WORLD'S DENSEST  
SMART LFP BATTERY

POWERFUL 12 V DURABLE

LITHIUM 100 Ah LFP-HP

1.25 kWh

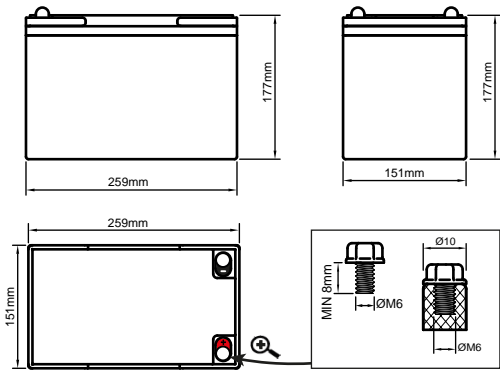
MADE IN FRANCE

17.7 cm



- Bluetooth
- Wi-Fi
- BOOST
- 30/+65°C

### DIMENSIONS



### THE MOST INNOVATIVE BATTERY ON THE MARKET

<b>Battery connected</b> Bluetooth	<b>Control and monitor your battery using your smartphone!</b> Use the application to configure, monitor, update and diagnose your battery. Real-time vision, complete control.
<b>Remote monitoring</b> Wi-Fi	<b>Your battery accessible 24/7 from every part of the world</b> Supervise, manage and optimize your OlenBox remotely and detect potential problems by setting alerts and alarms. You are always in control from anywhere in the world.
<b>Active balancing!</b> BOOST	<b>Boosted performance and lifetime</b> BOOST is a unique active and passive balancing technology. This guarantees a permanent and optimal internal balancing. Energy is transferred to the cells that need it.
<b>Extreme temperature resistant</b> -30/+65°C	<b>Automatic preheating in very cold temperatures</b> During the charge <b>AND</b> during the discharge! Don't worry about the outside temperature, the battery takes care of everything automatically! Working temperature -30°C   +65°C      Storage +15°C   +35°C

### MADE IN FRANCE INNOVATION

- ✓ High Performance Lithium LFP Technology
- ✓ Designed to last 20 years
- ✓ From 4,000 to 12,000 cycles (refer to curves)
- ✓ Smart-IoT Battery
- ✓ Fast charge
- ✓ Built-in safety mechanisms
- ✓ Designed for both hot and cold climates
- ✓ 60% lighter than a lead acid battery
- ✓ Compatible with MERLIN smartbox!

### SPECIFICATIONS

Electrical		Mechanical	
Rated voltage	13.0 V	Casing material	ABS
Rated capacity	96.0 Ah	Dimensions (W*D*H)	259*151*177 mm
Energy	1.25 kWh	Weight	<b>9.95 kg</b>
Internal resistance	< 9.0 mΩ	Terminals	M6
Monthly self discharge	< 3 %	Ingress protection code	IP65
Charge		Discharge	
Charge efficiency	> 98 % @0.2C	Discharge efficiency	> 96% @0.5C
Charge voltage	14.5 ± 0.1 V	Direct discharge current	<b>100 A</b>
Charge mode	CC/CV	Maximum current 10 sec.	<b>300 A</b>
Rated charge current	50.0 A	Minimum voltage	10.0 V
Charge cut-off current	0.05C	Configurable thresholds	Yes
Lead-acid chargers	Compatible	Exceeding power	On quotation

### APPLICATIONS

- Lighting & Instrumentation**  
Lighting, Camera, Energy case, Weather, Pumping...
- Martitime, mobility and robotics**  
Boats, Recreational vehicles, Robots, Trolleys...
- Critical power supply**  
UPS, Datacenter, Measurement, Medical...
- Solar storage**  
Self-consumption, renewable energies...

### QUALITY

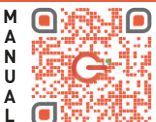
- ✓ Certifications: CE, RoHS, UN38.3 (cells)
- ✓ Manufacturer warranty: 5 years
- ✓ Manufacturing country: France

Cluster your batteries wirelessly, add a display, pilot relays or add a GPS with MERLIN smartbox!



CAN/RS485 equipments

MERLIN is sold separately



SMART BMS INSIDE



Lead acid Plug-&-Play



Charge: 50A -30°C | +50°C



Discharge: 100A -30°C | +65°C



Rated values 13V | 96Ah



Cells conform to UL STD 1642



RoHS



Li-ion



CE



**SAFE**  
**DURABLE**  
**POWERFUL**

- ✓ 4,000 cycles @80% DoD @80% SoH
- ✓ 8,000 cycles @70% DoD @70% SoH
- ✓ 12,000 cycles @60% DoD @80% SoH



### Longest service life on the market

Our systems are design to last up to 25 years, providing the lowest Total Cost of Ownership (TCO).



### Eco-friendly

Circular Economy product.  
Recyclable battery containing neither lead nor cobalt.



### 100% secure

LFP-HP chemistry is intrinsically safe and the BMS protect the battery. No risk of fire or deflagration.



### Onboard intelligence

Our intelligent BMS detects any anomaly.  
Connected batteries = 24/7 monitoring & supervision.



### Fast charge

There is no need to follow a sequential curve.  
Charging efficiency is close to 100%.

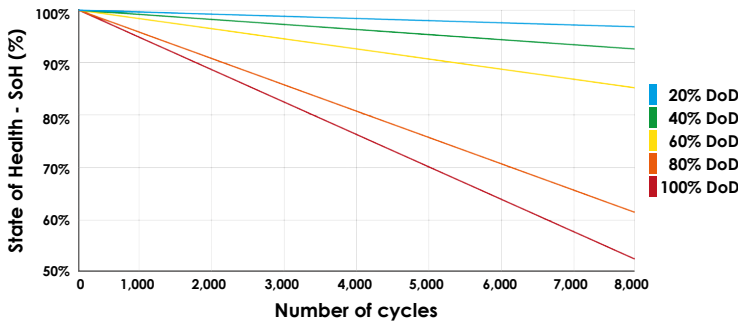


### Extreme temperature resistant

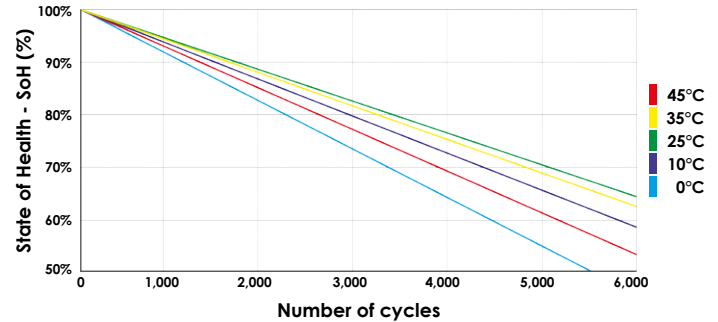
Olenegies systems are always the technological best choice for both hot and cold environments.

## LIFETIME CURVES

State of Health (SoH) related to the number of cycles for different Depths of Discharge (DoD) @1C and 25°C

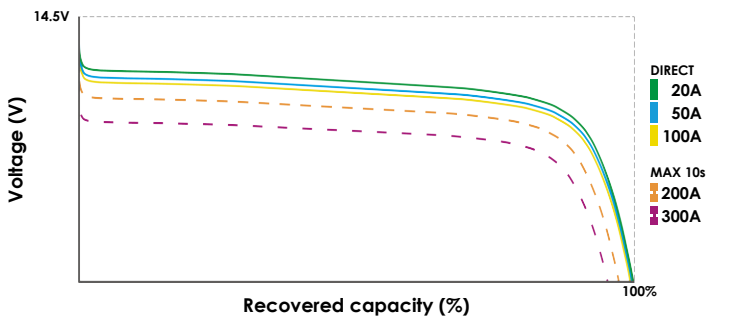


State of Health (SoH) related to the number of cycles for different temperatures @1C and 100% DoD

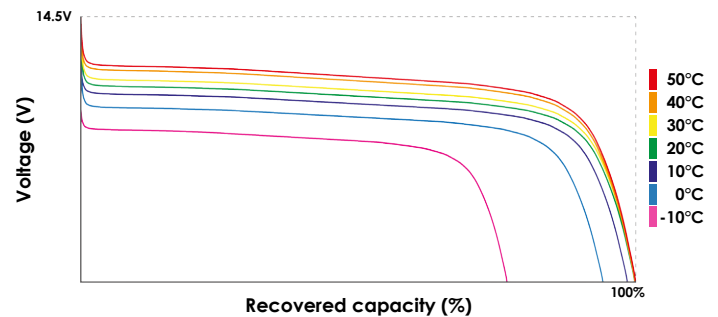


## DISCHARGE CURVES

Voltage curves @25°C for various discharge currents

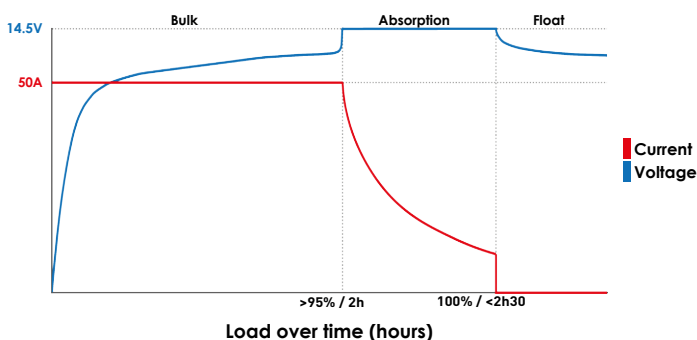


Voltage curves @C/5 for various temperatures



## CHARGE CURVE

Constant Current/ Constant Voltage (CC/CV) recommended charge



## SELF-DISCHARGE CURVE

Self-discharge according to time and storage temperature

