



The Lithium-Ion PowerBrick+ battery 24V-50Ah offers high level safety through the use of cylindrical cells in Lithium Ferro Phosphate technology (LiFePO4 or LFP).

PowerBrick+ 24V-50Ah integrates an innovative Battery Management System (BMS) in its casing to ensure a very high level of safety in use. The BMS constantly monitors and balances the battery cells to protect the battery and increase its life. The BMS also protects the battery from any misuse: deep discharge, high charging voltage, etc.

The PowerBrick+ range has been designed to replace lead-acid batteries advantageously, by offering a quadrupled energy density for an equivalent weight and size.

Thanks to its technology, the lithium battery PowerBrick+ 24V-50Ah can be installed in any position (vertically, lying on the side or head down).

The electrical parameters of the PowerBrick+ lithium battery 24V-50Ah are compatible in all respects with those of an AGM lead battery of 24V. In the vast majority of cases, the charging system can be kept the same and no additional accessories are required to perform the replacement.

Given PowerBrick+ can be 100% discharged, a lead acid or AGM battery can be replaced by a PowerBrick+ with half the capacity of lead acid battery (ie: PowerBrick+ 50Ah can replace a AGM 100Ah battery).

The PowerBrick+ Lithium battery 24V-50Ah has a nominal voltage of 25.6V. It can be easily assembled in series (up to 4 batteries in series) and in parallel (up to 10 batteries).

The voltage of the final assembly can be from 24V and up to 96V (for 4 packs assembled in series), which meets the needs of almost all electrical applications in traction, solar or wind storage, marine, robotics, trolleys, etc.

The battery is protected by a waterproof ABS case, splash and dust resistant (Protection index IP66).

The products PowerBrick+ are light, compact, efficient and can be used for all types of uses and applications. PowerBrick+ are designed to drop-in replacement of old generation batteries (Lead VRLA, AGM or OPZ batteries) in 24V, that are low performance and harmful to the environment (use of heavy metals and acid electrolytes).

The PowerBrick+ range benefits of a 2-year commercial guarantee, extendable to 5 years

Key Points

- **Battery 24V-50Ah – Lithium Iron Phosphate (LiFePO4 – LFP)**
- **Nominal voltage : 25.6V**
- **Stored Energy : 1.28 kWh**
- **Minimum 3000 cycles at 80% DOD (see chart tab)**
- **Continuous discharge current : 75A (1.92kW)**
- **Peak discharge current (< 30s) : 115A (3.0kW)**
- **Maximum continuous charge current : 50A**
- **High safety with advanced Built-in Battery Management System**
- **Monitoring of cell and PCB temperature, current, voltage, cell balancing, etc.**
- **100% Maintenance free**
- **Serial assembly can range from 24V to 96V (up to 4 items in series)**
- **Parallel assembly up to 10 items (24V-500Ah / 12.8kWh)**
- **Robust design in an insulated and waterproof casing (IP66)**
- **Operating temperature in charge : 0°C à +60°C**
- **Operating temperature in discharge: -15°C à +60°C**
- **Sealed case (protection index : IP66)**
- **CE, RoHS and UN38.3 certification**
- **Dimensions : 260mm x 168mm x 212mm**
- **Weight : 13.6Kg**
- **2 years commercial warranty as standard, extendable to 5 year**



24V battery pack - Lithium Iron-Phosphate (LiFePO₄) - 50Ah

- **High lifespan:** two thousand cycles and more (see chart)
- **Deep discharge** allowed up to 100 %
- Ultra safe **Lithium Iron Phosphate** chemistry (no thermal run-away, no fire or explosion risks)
- **Embedded BMS** (Battery Management System) : **improve lifespan AND secure the battery**
- No **Lead**, no **heavy metal**, no **toxic element**
- Calendar life > **10 years**
- Excellent **temperature** robustness (-20 °C up to +60 °C)
- **Flexible** deployment : up to 10 packs in parallel and 4 in serial
- **Constant power** during discharge (very low internal resistance)
- **Very low Peukert's losses** (energy efficiency >96 %)
- **Very low self discharge** (<3 % per month)
- **No memory effect**
- About **50 % lighter** and **40% smaller** than equivalent Lead-AGM battery with same usable energy
- **Certification** : CE, RoHS, UN 38.3, UL and CB

Technical Specifications

Electric	Nominal voltage	25.6V
	Nominal capacity	50 Ah
	Stored energy	1280 Wh
	Internal resistance	≤ 50mΩ
	Cycles	>2000 cycles (see chart)
	Self discharge	< 3% per month
	Energy efficiency	> 96%
	Standard Charge	Charge voltage
Charge mode		CC/CV : Constant Current / Constant Voltage
Continuous charge current / Maximum charge current		25 A / 50 A
BMS charge cut-off voltage		29.4V ± 0.2V
Standard Discharge	Continuous discharge current	75 A (1.92 kW)
	Maximum discharge current (< 30s)	115 A (3.0 kW)
	BMS discharge cut-off voltage	20 V
Environment	Charge temperature range	0°C à 45°C @60±25% relative humidity
	Discharge temperature range	-20°C à 60°C @60±25% relative humidity
	Storage temperature	0°C à 40°C @60±25% relative humidity
	IP protection level	IP 66
Mecanical	Cell assembly	26650 - 8S16P
	Casing material	ABS
	Dimensions	L : 260mm x P : 168mm x H : 212 mm
	Weight	13.6 kg
	Terminal	M8



Dimensions

