



### 12V battery pack - Lithium Iron-Phosphate (LiFePO<sub>4</sub>) - 135Ah

- **High lifespan: 3000 cycles** and more (see chart)
- **Cell heating system for negative-temperature operation:**
- **Remote monitoring by Bluetooth** (SOC, cell voltage, SOH, etc.)
- **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 **rare earths**, no **acid**, no **degassing**
- Calendar life > **10 years**
- Excellent **temperature** robustness (-20 °C up to +60 °C)
- **Flexible** deployment : up to 16 packs in parallel and 4 in series
- **Constant power** during discharge (very low internal resistance)
- **Very low Peukert's losses** (energy efficiency >98 %)
- **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**

### Technical Specifications

Electric	Nominal voltage / Nominal capacity	12.8V / 135Ah
	Stored energy	1728 Wh
	Volumetric energy density / Specific energy	186.8 Wh/L / 132.1 Wh/Kg
	Internal resistance	1mΩ
	Cycles	>3000 cycles (see chart)
	Self discharge	< 3% per month
	Energy efficiency	98%
Standard Charge	Charge voltage	14.4 V ± 0.2 V (Optional floating voltage : 13.36V max)
	Charge mode	CC/CV : Constant Current / Constant Voltage
	Continuous charge current / Maximum charge current	70A / 100A
	BMS charge cut-off voltage	14.8V ± 0.1V
Standard Discharge	Instant peak discharge current	800A (300 ms)
	Continuous discharge current	135A
	Maximum discharge current (< 30s)	200A
	BMS discharge cut-off voltage	10V
Environment	Charge temperature range	-20°C to +55°C
	Discharge temperature range	-20°C to 60°C
	Storage temperature	-5°C to 45°C
	IP protection level	IP65
Mechanical	Type of cells	Cylindrical LiFePO <sub>4</sub> cell
	Casing material	ABS
	Dimensions	260X170X208 mm
	Weight	13.10 kg
	Terminal	M8



### APPLICATIONS

- **Electrical vehicles and utilities**
- **Robotics and AGVs**
- **Solar and wind energy storage**
- **Marine**
- **Street lightning**
- **CCTV and security camera**
- **UPS, electric back-up**
- **Telecom**
- **Medical equipments**
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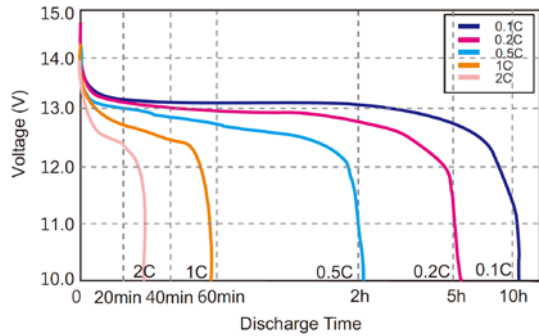
# PowerBrick

Lithium-Ion battery

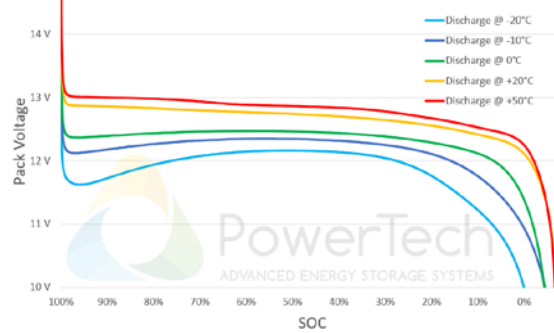
# Smart

## Charts and curves

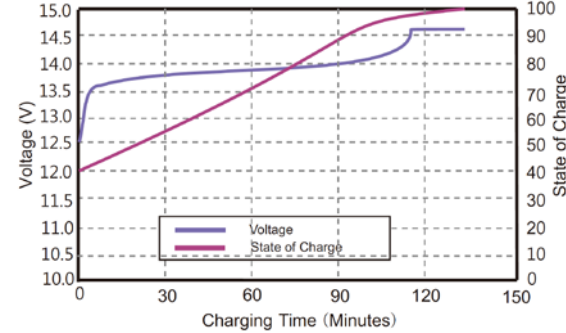
### Different Rate Discharge Curve @25°C



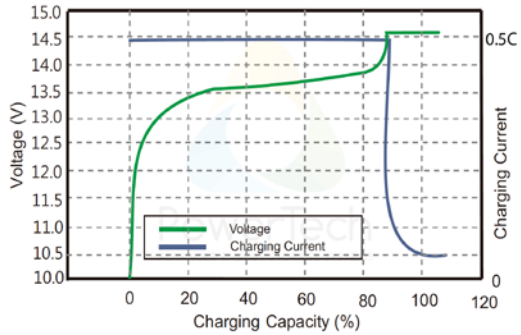
### Discharge Curves (0.5C) at different Temperatures



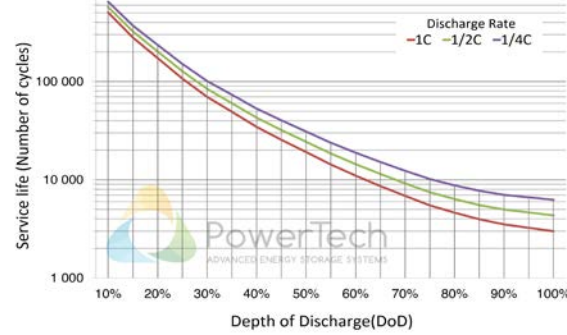
### State of Charge Curve @0.5C 25°C



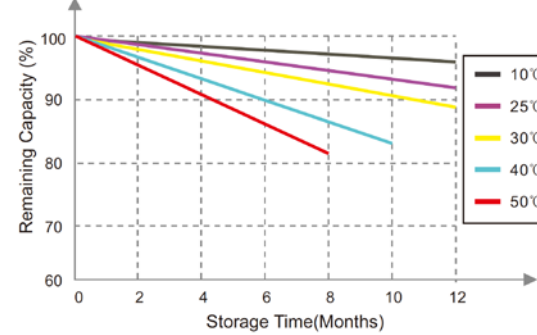
### Charging Characteristics @0.5C 25°C



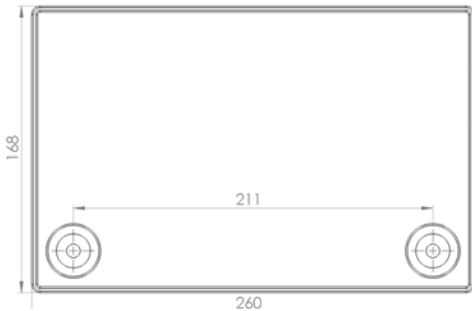
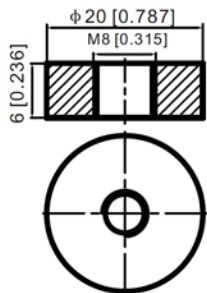
### Number of cycles vs. Depth of discharge (DoD)



### Different Temperature Self Discharge Curve



## Dimensions



PowerTech systems

V1.5

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