



PowerBrick+

12v Lithium-Ion battery pack



12V battery pack - Lithium Iron-Phosphate (LiFePO4)

- **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



Technical Specifications

		PB+ 7.5Ah	PB+ 12Ah	PB+ 20Ah	PB+ 30Ah	PB+ 45Ah	PB+ 70Ah	PB+ 100Ah	PB+ 150Ah	PB+ 250Ah
Certifications		CE, RoHS and UN 38.3								
Main Specs	Nominal voltage	12.8V								
	Nominal capacity	7.5 Ah	12 Ah	20 Ah	30Ah	45 Ah	70 Ah	100 Ah	150 Ah	250 Ah
	Stored energy	96.0 Wh	153.6 Wh	256 Wh	384	576 Wh	896 Wh	1.28 kWh	1.92 kWh	3.2 kWh
	Cycles	>3500 cycles (see chart)								
	Self discharge	< 3% per month								
	Energy efficiency	> 96%								
Charge	Charge voltage	14.4V ± 0.2V								
	Charge mode	CC/CV : Constant Current / Constant Voltage								
	Maximum charge current	10 A	12 A	20 A	30 A	45 A	70A	100 A	150 A	150 A
	BMS Cut-Off voltage	14.8V ± 0.1V								
Discharge	Continuous discharge current	15 A	24 A	40 A	45 A	55 A	100 A	125 A	150 A	180 A
	Peak discharge current (<30s)	20 A	30 A	60 A	70 A	90 A	150 A	200 A	250 A	250 A
	BMS Cut-Off voltage	10 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								
	IP protection level	IP 65								
Mechanical	Cell	Sealed cylindrical lithium cell								
	Casing material	ABS								
	Dimensions	L : 151mm P : 65mm H : 92 mm	L : 151mm P : 98mm H : 95 mm	L : 180mm P : 76mm H : 168 mm	L : 180mm P : 76mm H : 168 mm	L : 196mm P : 135mm H : 172 mm	L : 228mm P : 138mm H : 210 mm	L : 260mm P : 168mm H : 212 mm	L : 307mm P : 167mm H : 212 mm	L : 500mm P : 280mm H : 217 mm
	Weight	1.08 kg	1.55 kg	2.80 kg	3.44 kg	5.25 kg	7.8 kg	11.5 kg	15.8 kg	31.6kg
	Terminal	Clip Faston 6.35mm		M5		M6		M8		

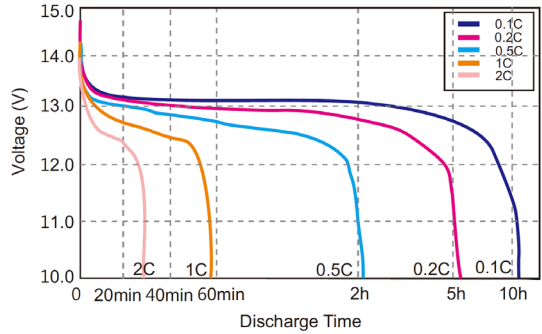
APPLICATIONS

- **Electrical vehicles and utilities**
- **Solar and wind energy storage**
- **Marine**
- **Street lighting**
- **CCTV and security camera**
- **UPS, electric back-up**
- **Telecom**
- **Medical equipments**

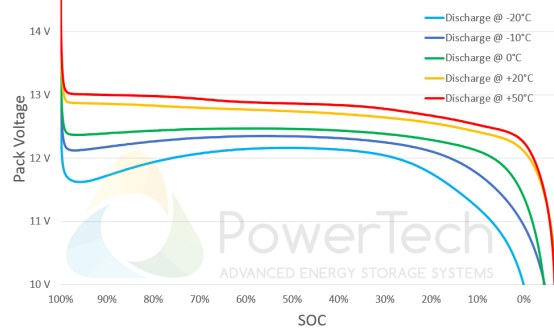
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Charts and curves

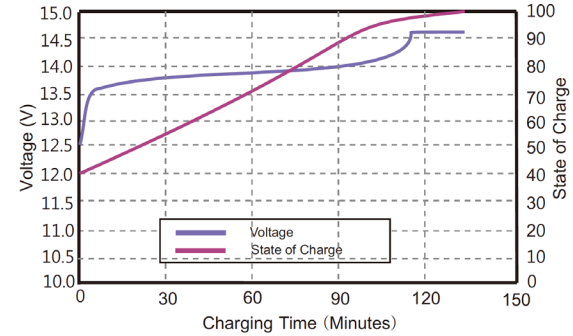
Different Rate Discharge Curve @25°C



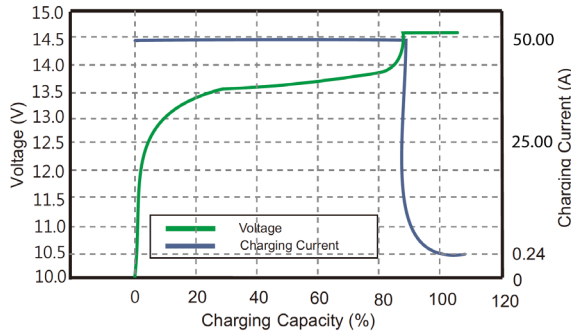
Discharge Curves (0.5C) at different Temperatures



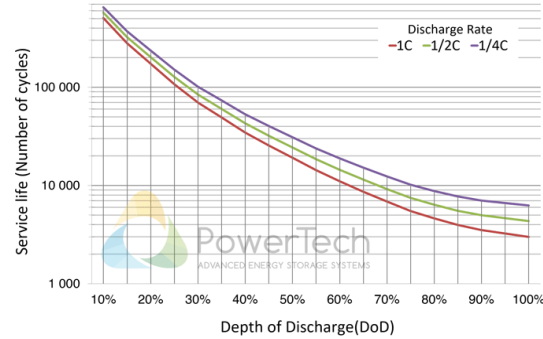
State of Charge Curve @0.5C 25°C



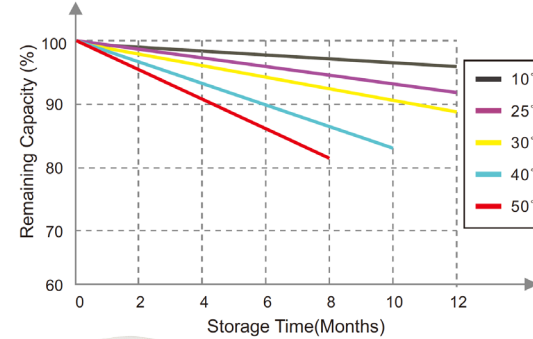
Charging Characteristics @0.5C 25°C



Number of cycles vs. Depth of discharge (DoD)



Different Temperature Self Discharge Curve



Terminal



PowerTech Systems SAS
ZAC Charles Renard - Bat.A1
6 Boulevard Georges Marie Guynemer
78230 SAINT CYR L'ECOLE - France

SAS au capital de 800 000 Euros
SIRET : 79392657700032 - TVA : FR33793926577

www.powertechsystems.eu
+33 (0) 1 85 40 09 70
contact@powertechsystems.eu