

# Power Brick solid State

Lithium-Ion battery

## CRN + RS485

### 24V Solid-State battery pack - LiFePO<sub>4</sub> - 120Ah - 3.07kWh

- **High lifespan: 4500 cycles** and more (see chart)
- Communication by CAN Bus + RS 485 to retrieve all aggregated informations from battery pack (up to 16 packs in parallel)
- New Solid-State cell technology for better performance and safety
- Active Balancing for fast, efficient cell voltage equalization
- Remote monitoring by Bluetooth (SOC, cell voltage, SOH, etc.)
- Fast recharge in less than one hour
- Ultra safe Solid-State Lithium Iron Phosphate chemistry (no thermal run-away, no fire or explosion risks)
- Embedded BMS (Battery Management System): improve lifespan and safety of the battery
- Strict cell matching for pack consistancy. Laser cell welding
- **Cell heating system** for use in cold conditions

- Precharge system for high capacitance loads
- No Cobalt, no Manganèse, no Nickel, no rare earth
- Calendar life > 10 years
- Excellent **temperature** robustness (-20 °C up to +60 °C)
- **Constant power** during discharge (very low internal resistance)
- Very low Peukert's losses (energy efficiency >98 %)
- Very low self discharge (<3 % per month)
- Deep discharge allowed up to 100 %
- No memory effect
- About 50 % lighter and 40% smaller than equivalent Lead-AGM battery with same usable energy
- Certification: CE, RoHS, UN 38.3, Cell: IEC 62619

#### **Technical Specifications**

Electric	Nominal voltage / Nominal capacity	25.6 V / 120Ah
	Stored energy	3072 Wh
	Volumetric energy density / Specific energy	137.0 Wh/L / 146.3 Wh/Kg
	Internal resistance	≤ 10mΩ
	Cycles	> 4500 cycles (see chart)
	Self discharge	< 3% per month
	Energy efficiency	> 98%
Standard Charge	Charge voltage	$28.8V \pm 0.4V$ (Optional floating voltage : 26.72V max)
	Charge mode	CC/CV : Constant Current / Constant Voltage
	Continuous charge current / Maximum charge current	130A / 150A
	BMS charge cut-off voltage	29.6 V ± 0.1V
Standard Discharge	Instant peak discharge current	800A (300 ms)
	Continuous discharge current	130A
	Maximum discharge current (< 30s)	170A
	BMS discharge cut-off voltage	20V
Environment	Charge temperature range	0°C to +55°C
	Discharge temperature range	-20°C to 60°C
	Storage conditions	0°C to +50°C @60±25% relative humidity
	IP protection level	IP65
Mechanical	Type of cells	Solid-State LiFePO4 cells
	Casing material	ABS
	Dimensions	505x185x242 mm
	Weight	21.0 kg
	Terminal	M8 for power - IP67 M12 connector for CAN / RS485













#### **APPLICATIONS:**



Electrical vehicles and utilities



Industrial carts and forklifts



**Marine applications** 



**Street lightning** 



CCTV and security camera



**Robotics and AGVs** 



Solar and wind energy storage

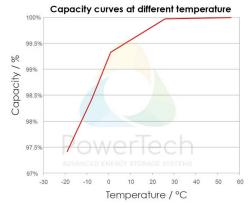
and much more...

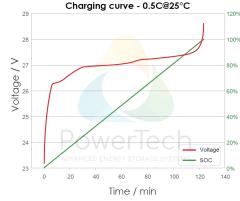
# Power Brick Solid State

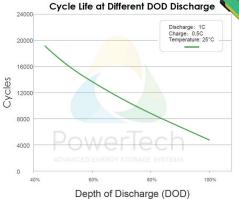
Lithium-lon battery

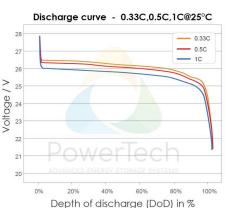
CRN + RS485

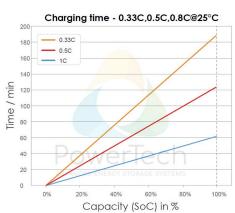
#### **Charts and curves**

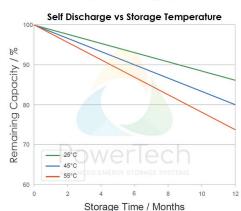




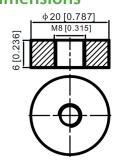


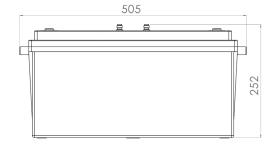


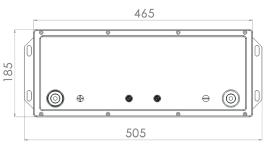




### Dimensions











00











PowerTech systems

...

PowerTech Systems SAS ZA Charles Renard - Batiment A1 6 Bld Georges Guynemer 78210 ST CYR L'ECOLE - France

SAS au capital de 1 000 000 Euros SIREN : 793926577 – TVA : FR33<u>793926577</u>

www.powertechsystems.eu +33 185 400 970 contact@powertechsystems.eu