

Lithium Iron **LIFEPO4 BATTERY RANGE — 7 TO 16 KWH**

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Floor-standing LiFePO4 energy storage modules from 7.17 kWh to 16.08 kWh in 24 V and 48 V configurations, with dual-layer BMS protection, soft-start and a rated life of 6000 cycles or more. Modules parallel to build larger banks.

7–16 KWH PER MODULE	6000+ RATED CYCLES	200 A MAX DISCHARGE	300 A 10 S PEAK
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TYPICAL APPLICATIONS

- **Whole-home energy storage** — full-household solar self-consumption and overnight backup.
- **Commercial backup** — offices, retail, hospitality and clinics requiring extended runtime.
- **Off-grid systems** — lodges, farms and remote installations with no grid connection.
- **Peak shaving and load shifting** — reduces demand charges and peak-tariff consumption.
- **Generator fuel reduction** — stores generator output so the set runs loaded and for less time.
- **Telecom and light industrial** — floor-standing storage for higher-current applications.

KEY FEATURES

- **LiFePO4 chemistry** — high thermal stability and a rated cycle life of 6000 cycles or more.
- **Dual active protection** — two independent protection layers at BMS level.
- **Comprehensive BMS** — over-discharge, over-charge, over-current and temperature protection.
- **Soft-start function** — limits inrush current when the inverter starts from the battery.
- **Automatic cell balancing** and continuous charge/discharge state management.
- **Parallel expansion** — multiple modules connect in parallel to raise capacity and current.
- **High discharge capability** — up to 200 A continuous, 300 A peak for 10 seconds.
- **Firmware upgradeable** over RS485 / RS232 from a host controller.
- **Low self-discharge** — up to 6 months storage without recharging; no memory effect.
- Non-toxic, free of heavy metals and environmentally safe.

TECHNICAL SPECIFICATION

PARAMETER	51.2 V 205 Ah	25.6 V 280 Ah	51.2 V 280 Ah	25.6 V 314 Ah	51.2 V 314 Ah
ELECTRICAL					
Nominal Voltage	51.2 V	25.6 V	51.2 V	25.6 V	51.2 V
Nominal Capacity	205 Ah	280 Ah	280 Ah	314 Ah	314 Ah
Nominal Energy	10.50 kWh	7.17 kWh	14.34 kWh	8.04 kWh	16.08 kWh
Cell Chemistry	Lithium iron phosphate (LiFePO4)				
Cell Count (series)	16	8	16	8	16
Charge Cut-Off Voltage	58.4 V	29.2 V	58.4 V	29.2 V	58.4 V
Discharge Cut-Off Voltage	40.0 V	20.0 V	40.0 V	20.0 V	40.0 V
Depth of Discharge	90 % recommended				
CHARGE					
Nominal Charge Current	50 A	75 A	75 A	75 A	75 A
Maximum Charge Current	100 A	150 A	150 A	150 A	150 A
Nominal Charge Power ¹	2.6 kW	1.9 kW	3.8 kW	1.9 kW	3.8 kW
DISCHARGE					
Maximum Continuous Discharge Current	150 A	200 A	200 A	200 A	200 A
Peak Discharge Current (10 s)	200 A	300 A	300 A	300 A	300 A
Continuous Discharge Power ¹	7.7 kW	5.1 kW	10.2 kW	5.1 kW	10.2 kW
Recommended Inverter Loading	5 – 8 kW	3 – 5 kW	5 – 8 kW	3 – 5 kW	5 – 8 kW
SERVICE LIFE					
Cycle Life ²	≥ 6000 cycles at 25 °C, to 70 % of rated capacity				
Self-Discharge	Storage up to 6 months without recharging; no memory effect				
ENVIRONMENTAL					
Charging Temperature Range ³	0 °C to +55 °C				
Discharging Temperature Range	–20 °C to +60 °C				
Storage Temperature Range	–20 °C to +50 °C				
INTERFACE, MECHANICAL & CERTIFICATION					
Communication Ports	RS485 / RS232 (host firmware upgrade supported)				
Communication Protocol	Pylontech · Deye/Sunsynk · Growatt · GoodWe · Victron · SofarSolar · LuxPower · Solis · SMA · SRNE · Outback · AlphaESS				
Modules in Series	Not permitted — parallel connection only				
Modules in Parallel	Permitted, identical modules only. Maximum is set by the inverter — typically 2 to 4 modules				
Transport Certification	UN38.3 / MSDS / DGM				

INVERTER COMPATIBILITY

ITEM	DETAIL
SATTE inverters	SMS · SML · SINV · SNM-ECO · SINV TURBO, at the matching DC system voltage
Compatible third-party inverter brands	Pylontech · Deye/Sunsynk · Growatt · GoodWe · Victron · SofarSolar · LuxPower · Solis · SMA · SRNE · Voltronic · Outback · AlphaESS · MUST
Basis of compatibility	The inverter must support one of the BMS protocols listed above. Pylontech CAN is the most widely implemented.
Not supported	High-voltage hybrid inverters (200 V and above) — this is a low-voltage battery
Verification required	Bench-test each inverter model before sale — see document SATTE-TG-COMPAT-001

Note 1 — Power figures. Charge and discharge power are calculated from the rated currents at nominal pack voltage. Continuous discharge power is the ceiling on inverter output the module can support; recommended inverter loading allows margin for surge and inverter losses.

Note 2 — Cycle life. Rated at 25 °C ambient with end of life defined as 70 % of rated capacity remaining. Sustained operation above 35 °C will reduce achievable cycles; site the battery in a shaded, ventilated location.

Note 3 — Charging temperature. The 55 °C upper limit is the manufacturer's stated figure. For maximum cycle life, charging above 45 °C cell temperature should be avoided. This limit requires confirmation — see Note 4.

Note 4 — Bank configuration. Modules with an integral BMS must never be wired in series; parallel connection only, and only with identical modules of the same capacity and manufacturing batch. The number of modules a system can take is set by the inverter, not the battery. Never mix brands, capacities or manufacturing batches in one bank.