PINAKIN POWER SOLAR

TECHNICAL DATASHEET
PPS-LFP-24V-200Ah

24V CLASS | 200Ah | LiFePO■ HOME ENERGY STORAGE



25.6V	200Ah	5.12kWh	5 YEARS
Nominal voltage	Rated capacity	Nominal energy	Limited warranty*

Product description

Rechargeable 8-series lithium iron phosphate battery pack for compatible 24V-class residential solar hybrid inverters and backup systems. Selected design: 25.6V nominal, 200Ah rated capacity, 5.12kWh nominal energy and basic 100A BMS. The 100A BMS limits available current; stored energy is not continuous output power.

Electrical specifications

Parameter	Specification	Notes
Chemistry	Lithium Iron Phosphate (LiFePO■)	Cell supplier/model to be recorded
Pack configuration	8S2P; 16 × 3.2V 100Ah cells, or approved equivalent	Verify actual production BOM
Nominal voltage	25.6V DC	24V-class system
Rated capacity	200Ah	At cell supplier test conditions
Nominal energy	5,120Wh (5.12kWh)	25.6V × 200Ah
Recommended usable energy	Approx. 4.10kWh DC	80% design window; actual setting/warranty dependent
Charge voltage	28.4–29.2V DC	29.2V = 3.65V/cell; confirm cell limits
Recommended charge current	40–80A	Subject to cell/BMS thermal limits
Maximum charge current	Up to 100A only if specifically approved	100A discharge rating does not prove charge rating
Continuous discharge current	Up to 100A proposed	Subject to cell and BMS validation

Parameter	Specification	Notes
Nominal continuous DC power	2.56kW at 25.6V / 100A	Varies with voltage and temperature
Inverter low-voltage setting	Approx. 22.4V starting point	Coordinate with cell-level BMS cutoff
BMS cut-offs	Cell-based over/under-voltage thresholds	Set per cell maker and BMS supplier
Float / equalization	Float disabled or low standby; equalization OFF	Use LiFePO■ profile
Communication	Basic BMS; no external communication specified	No Bluetooth/CAN/RS485 claim

Protection, operating limits & installation

Feature	Specification / requirement
BMS	Basic 100A class; verify separate charge and discharge ratings
Protection functions to verify	Cell over-voltage, cell under-voltage, over-current, short-circuit and temperature protection
Cell balancing	Only claim if included in fitted BMS; verify balancing type/current
Charge temperature	0°C to 50°C proposed; below 0°C charging prohibited unless cell maker permits
Discharge temperature	-20°C to 55°C proposed; derate near limits
Storage	Cool, dry location; follow cell maker SOC and temperature instructions
Cooling	Natural convection; provide ventilation and clearance
Enclosure	Metal enclosure; IP rating not specified
Terminals	Insulated, polarity-marked DC terminals; current rating to be verified
External protection	Correctly rated DC fuse/breaker close to battery positive terminal
Cabling	Size for 100A continuous duty, cable length and voltage drop

Illustrative home-backup guide

Assumes 80% usable battery energy (4.096kWh DC) and 90% inverter efficiency, giving about 3.69kWh AC: 100W ≈ 36.9h; 200W ≈ 18.4h; 300W ≈ 12.3h; 500W ≈ 7.4h; 1,000W ≈ 3.7h; 1,500W ≈ 2.5h; 2,000W ≈ 1.8h. Actual runtime varies with load, temperature, inverter losses, battery age and BMS limits.

Compatibility & safety

Use only with a 24V-class inverter/charger configured for 8S LiFePO■. Disable lead-acid equalization. Confirm charge voltage/current, low-voltage cutoff, inverter surge demand and BMS ratings. Do not connect to 12V or 48V equipment. Install in a dry, ventilated, protected location away from heat and direct sunlight. Qualified installation is required.

Warranty & technical release note

5-year limited warranty — proposed commercial term. Final warranty card must define start date, covered defects, capacity-retention threshold, cycle/throughput limit, operating conditions, exclusions and claim procedure. Validate cell datasheets, BMS model/thresholds, current ratings, temperature cut-offs, enclosure dimensions/weight, fuse and terminal ratings, thermal performance and applicable Indian compliance before production release. No BIS/IEC/UL certification is claimed.

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