

Storage

Elementa 3

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6.25 MWh | 587 Ah Battery Cell



Enhanced Efficiency

- High-performance 587Ah cells with an industry-leading 417Wh/L energy density
- Optimized space efficiency, featuring top-mounted cooling chillers that increase site energy density by 24.7%, maximizing land utilization
- Advanced intelligent temperature control maintains cell $\Delta T \leq 2.5^\circ\text{C}$, ensuring thermal stability and efficient operation
- Chip-level active balancing technology, which supports flexible adjustment of balancing current and achieves 96% balancing efficiency, significantly extends the overall throughput

Improved Flexibility

- Advanced high-temperature refrigerant technology ensures peak performance in extreme heat up to 55°C , enhancing system reliability
- Engineered for extreme conditions, withstanding dust storms, extreme temperatures, salt mist, high humidity, and earthquakes for uninterrupted operation
- Multiple system configurations for diverse applications, with dual DC outputs that enhance operational flexibility and integration options

Smart O&M

- The two-way stop valve streamline maintenance procedures, improving efficiency and reducing downtime
- Module dispersible tooling reduces maintenance time by 50%
- One-click upgrades enable seamless system optimization, minimizing operational disruptions and maintenance costs

Comprehensive Safety

- EV-grade battery cells undergo rigorous abuse testing, ensuring intrinsic safety and long-term reliability
- Electrolyte leakage sensor with 20% higher sensitivity, detects leaks early and provides ultra-early warning of thermal runaway in battery cells
- Millisecond-level early warning system with 1:1 NTC monitoring, enabling proactive risk detection and enhanced safety
- Top-tier UL94-5VA flammability-rated modules provide rapid hazard suppression, effectively preventing thermal propagation
- Electrical protection with an emergency stop button enables millisecond-level fusing, offering robust electrical defense
- Sandwich-type composite wall with 2-hour fire resistance delivers ultimate protection in critical scenarios

Preliminary

BATTERY PARAMETERS

Cell Type	3.2V, 587Ah
Battery Configuration	416S8P
Nominal Capacity	6250 kWh
Typical Operational Duration	2-8 hours
Nominal Voltage Range	1123.2V - 1497.6 V

SYSTEM PARAMETERS

Dimensions (W*H*D)	6058*2896*2438mm (Standard 20ft High Cube Container)
Weight	~47 T
Degree of Protection	IP55-Excl.TMS (Temperature Management System) IP67-Module
Operating Ambient Temperature	-35°C - 55°C
Altitude	≤4000 m
Cooling Mode	Liquid Cooling
Fire Safety	Dry pipe, heat and smoke sensors, gas sensor and active ventilation system, automatic aerosol-based fire suppression system, fire resistant enclosure (2h Optional), deflagration panel (Optional)
Anti-corrosion Design	C4 (C5 Optional)
Noise	≤75dB (35°C) ≤65dB (Optional with noise mitigation kit)
Communication protocols	CAN/RS485/Ethernet
Standard	IEC61000-6-2/4, IEC62477-1, IEC62619, IEC62933-5-2, UL1973, UL9540, UL9540A.

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