

tecned S-SYSTEM

Modular Indoor Energy Storage Platform 125 kVA -1000 kVA with full BESS functionality

TECNED S-SYSTEM is a modular, cabinet-based Energy Storage System designed for safe indoor installation in industrial, infrastructure, public and mission-critical environments.

Built around intrinsically safe sodium-ion battery technology, **S-SYSTEM** eliminates the need for containerized fire-mitigation measures typically required for lithium-based ESS.

S-SYSTEM combining power electronics, battery storage, and intelligent control in a compact steel cabinet.

The platform is optimized for peak shaving, energy optimization, backup support, and solar integration, while maintaining a conservative safety and operating philosophy.

Available in 125 kVA to 1000 kVA configurations, **TECNED S-SYSTEM** scales horizontally by paralleling cabinets, allowing systems from hundreds of kWh to multi-MWh without increasing per-cabinet risk or complexity.

Configuration

Max per power cabinet

Max. 4 cabinets parallel

Effective system rating

250 kW

1000 kW

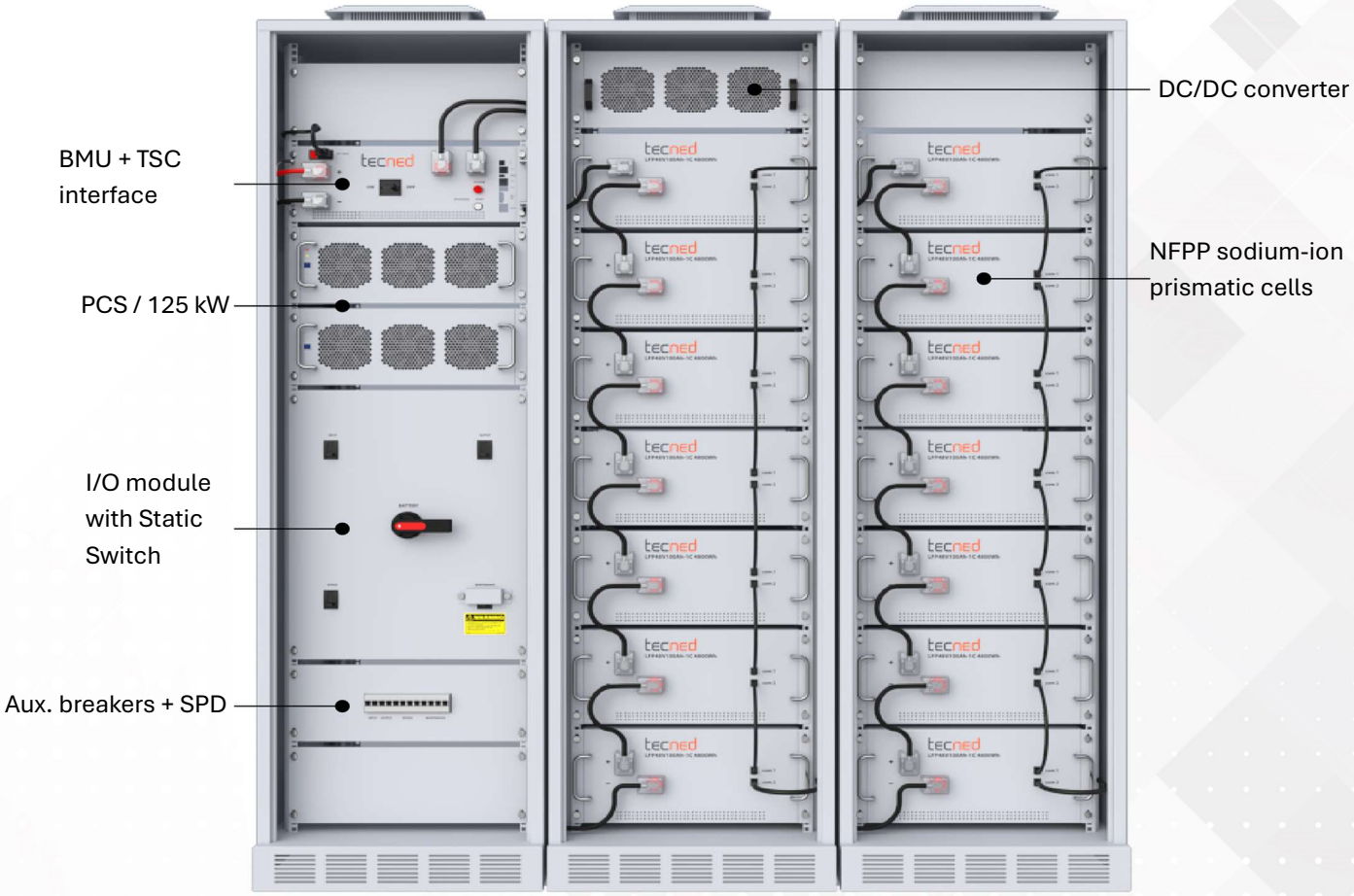
Key features – TECNED S-SYSTEM

- Single cabinet platform for 125 kVA and 250 kVA applications
- Modular bi-directional PCS architecture
- Grid Supply / Grid-Tie Functionality
- Sodium-ion battery with intrinsically low fire risk
- Indoor-safe design:
  - No container required
  - No explosion venting
  - No gas fire suppression
- Energy per cabinet: typically, 200–400 kWh
- Safety architecture:
  - Multi-level BMS (cell / module / rack)
  - DC isolation, fuses, and contactors
- Insulation monitoring and emergency stop
- Thermal management: Controlled air cooling
- Scalable system design: Parallel cabinets for higher power or energy
- Serviceability: Front access power/battery modules

Compliance: Designed for IEC 62619, IEC 62933-5-2, IEC 62477-1, CE conformity

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Parameter	S-SYSTEM 125 kVA	S-SYSTEM 250 kVA	S-SYSTEM 500 kVA	S-SYSTEM 750 kVA	S-SYSTEM 1000 kVA
PCS - 62.5/125 kW	2	4	8 (parallel cabinets)	6 (parallel cabinets)	8 (parallel cabinets)
Effective AC rating	125 kVA	250 kVA	500 kVA	750 kVA	1000 kVA
AC voltage	400 Vac ±15%, 3P4W				
AC frequency	50 / 60 Hz				
DC voltage	450 – 1000 Vdc				
Grid connection	Grid-tied & island & black start				
Standard Response	< 15 ms				
Battery technology	Sodium-ion (NFPP), Polyanionic Prismatic cells				
Typical energy range	200–400 kWh	400–800 kWh	0.8–1.6 MWh	1.2–2.4 MWh	1.6–3.2 MWh
Cooling	Forced air (cabinet)				
Installation	Indoor cabinet				
Scalability	250 kW cabinets up to 1000kW				
Design compliance	IEC 62619 / 62933-5-2 / 62477-1				

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