



TECHNICAL SPECIFICATION

CITADEL SERIES

LiFePO4 261 kWh – 125 kW – L – HPCS

Version 1.0

1. PRODUCT INFORMATION

The Citadel 261 kWh / 125 kW liquid-cooled energy storage system is a highly integrated solution combining LFP battery modules, a composite power control unit (BMS, PCS, EMS), a fire suppression system, a thermal management system, and a cloud-based monitoring platform.

Featuring an advanced integrated design, the system delivers enhanced safety performance, simplified operation and maintenance, and optimized economic returns. It is engineered to flexibly meet diverse energy requirements, providing a low-carbon and high-efficiency solution for a wide range of commercial and industrial (C&I) applications.

High Integration & Multi-Scenario Adaptability

The system is designed for seamless compatibility with photovoltaic systems, grid connections, and diesel generators, enabling flexible deployment across multiple application scenarios.

It integrates all core subsystems within a single platform, including:

- Battery modules
- PCS (Power Conversion System)
- STS (Static Transfer Switch)
- EMS (Energy Management System)
- Fire suppression system
- Intelligent liquid cooling system

Comprehensive Safety Protection

The system incorporates multiple layers of safety features, including black-start capability and robust protection against overcurrent and reverse power flow. It is equipped with seamless grid-bypass functionality, enabling direct supply of utility power to the backup output, ensuring uninterrupted operation of critical loads.

Intelligent Energy Management & Efficiency Optimization

The system enables advanced energy management functions, including demand control and anti-backfeed capability. It also provides dynamic reactive power compensation (DRPC) for real-time power factor optimization, improving overall energy utilization efficiency.

High-Yield & Low-Carbon Solution

Through its integrated architecture, the system enhances operational safety, simplifies system management, and improves overall economic performance. It delivers a low-carbon, high-efficiency energy storage solution tailored for diverse commercial and industrial applications.

2. TECHNICAL SPECIFICATIONS

Model	Citadel 261 kWh - 125 kW - L - HPSCS
System	
Nominal Capacity	314 Ah
Nominal Energy	261 kWh
Usable Energy	≥ 243 kWh
Nominal Output Power	125 kW
IP Rating	IP54
Operating Temperature	-20~55°C
Cooling Mode	Liquid cooling
Fire Protection	Aerosol
Altitude	4000m (>2000m derate)
Cycle Life	≈8000 cycles
Dimension(W*D*H)	1400 × 1350 × 2250 mm
Weight	≈2100 kg
Certification	IEC62619/CE/UN38.3
Output AC (grid side)	
Rated Output Power	125 kW
Max. Apparent Output Power	125 kVA
Rated Grid Voltage	3/N/PE, 220/380 V or 230/400 V
Rated Grid Frequency	50 Hz / 60 Hz
Rated Grid Output Current	189.9 A / 180.4 A
Power Factor	-0.99~+ 0.99
THDi	< 3%
Output AC (back-up)	
Rated Output Power	125 kW
Max. Apparent Output Power	1.2 times of rated power, 10 mins 1.4 times of rated power, 100s 1.6 times of rated power, 10s 2 times of rated power, 200ms
Back-up Witch Time	<10ms
Rated Output Voltage	3/N/PE, 220V/380 V or 230V/400 V
Rated Frequency	50 Hz/60 Hz
THDv[@linear load]	<2%
PV Side	
Max. PV Input Power	250 kW
MPPT Voltage Range	150 - 950 V
Max. DC Input Current	10 × 42 A
No. of MPPTs / Max. Strings	10 / 20

Liquid Cooling System	
Cooling Capacity	5 kW
Rated Circulating Flow Rate	46.5 L/min @ 60 kPa
Refrigerant	R134a
Coolant Type	50% Ethylene Glycol Solution

Important note:

* Product design and technical specifications are preliminary and subject to change without notice. The brand reserves the right of final interpretation.

*This document is provided for reference only; the officially released product shall prevail.