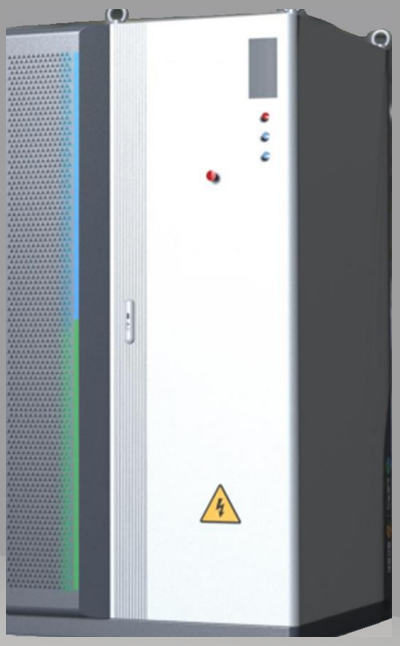
FlexiStore Commercial and Industrial Energy Storage System



Introduction

The FlexiStore commercial and industrial (C&I) product series, developed by Shanghai Electric, is a standardized portfolio featuring high safety and high reliability. Adopting a highly integrated system design, the series offers flexible adaptability to a wide range of C&I scenarios, enabling peak-shaving and valley-filling, load shifting, and alleviating stress on the power grid.

The product adopts a liquid-cooled split-type double-row design, and features long cycle life, excellent temperature consistency, high energy density, plug-and-play functionality, and a simple and compact structure. They can be equipped with an operation and maintenance management platform to realize remote monitoring and facilitate easy operation and maintenance.

System Features

Standardized & split-type design

- Modular design for easy maintenance
- Compact size for high space utilization
- Remote installation guidance available

Seamless switching & redundant power supply

- Dual-circuit redundant power supply supported with AC priority
- Seamless switching to DC power upon AC power failure

Safety, environmental friendliness & strong adaptability

- Equipped with an aerosol fire protection system, with high safety and environmental friendliness
- Equipped with explosion venting and air intake/exhaust system, supporting water fire protection access
- Meeting the fire protection requirements of NFPA-855

Comprehensive protection & real-time monitoring

- Ethernet communication supported (Modbus-TCP protocol)
- Three-level protection and control strategy tailored for lithium battery BMS
- Advanced BMS real-time detection to ensure safe operation on both AC and DC sides

Excellent electrical performance & long service life

- High battery consistency and low internal resistance for superior charge and discharge performance
- Excellent thermal management design and outstanding temperature difference control to meet the requirements for long-life operation

Unattended operation & intelligent operation and maintenance

- Can be connected to the intelligent energy storage operation and maintenance system, supporting comprehensive remote monitoring via computer WEB and mobile terminals
- Cloud-edge collaboration to support fault alert and remote control, facilitating safe operation
- Intelligent statistical analysis to provide key data reports
- Remote software upgrade supported

Application Scenarios

Zero-carbon Smart Parks | PV-storage-charging Integration | Commercial Complexes | Data Centers | 5G Base Stations | Residential Use | Microgrid | Mining Areas | Emergency Energy Storage Power Supplies | Urban Rail Transit

System Parameters

Product Model		FlexiStore-418
System Parameters		
Nominal Energy, kWh		418
Actual Output Energy, kWh		387
Discharge Rate		0.5P
Operating Humidity Range		0%~95%
Operating Ambient Temperature		-20 ℃ – 50 ℃ ② (Derating above 45 ℃)
Altitude		≤3000m
System Cycle Life		≥8000, 0.5C@25°C 70%EOL
Maximum System Cycle Efficiency		93%
External Communication		RJ45 interface, Modbus-TCP protocol
Cooling Method		Liquid cooling
Noise		≤80dB(A)@1m
IP Rating		IP55
Corrosion-proof Grade		C3-M ①
Fire Protection System		Aerosol, equipped with combustible gas detectors, air intake and exhaust system, and explosion venting panels, supporting water fire protection access ②
Dimensions, W×D×H		1.4×1.32×2.4m
Recommended PCS Power		100kW-215kW
Weight, T		4
Certification Standards	Cell	UL 9540A, IEC62619
	Module	UL 9540A, IEC62619, UN38.3
	Whole Cabinet	IEC 62619: 2022, IEC 63056: 2020, EN IEC 61000-6-2:2019\IEC 61000-6-4:2019, UN 38.3
Battery Parameters (DC)		
Rated Capacity		314Ah (LFP)
Configuration		1P416S
Rated Voltage, V		1331.2
Voltage Range, V		1164.8-1497.6

Note: The product appearance and parameters are for reference only. The actual products shall prevail.

Note: The product supports single-unit operation and multi-unit centralized control (up to 12 units). The charging/discharging function of the energy storage system can be realized by configuring centralized or distributed PCS.

Note ①: The standard product has a corrosion-proof grade of C3-M, and higher standards can be customized.

Note ②: Designed in accordance with the NFPA-855 standard.

Internal Layout Drawing of the Product