



Application Scenarios

Suitable for sites with high power capacity demands, such as large-scale commercial and industrial enterprises, data centers, factories, and mobile energy storage supply.



High Power • High Energy Density

Integrated design with 250kW / 522kWh, occupying only 2.7m². System efficiency >88%, supports multi-unit parallel expansion. Meets the energy demands of large-scale commercial and industrial scenarios.



PV-Storage Integration • Dual MPPT

Built-in dual 63kW MPPT channels (total power 252kW), weighted efficiency 99%. Enables intelligent energy flow control among PV, storage, load, and grid. Supports flexible AC / DC coupling and retrofit upgrades.



Uninterrupted • Highly Reliable Power Supply

Integrated STS (Static Transfer Switch) enables seamless grid-connected / off-grid switching in < 20ms grid-connected / off-grid seamless switching. Ensures continuous power supply for critical loads, with 110% continuous overload capacity and 120% short-term output capability.



Intelligent Management • Cloud Collaboration

Two-layer BMS for precise cell management. Built-in BMS with local + cloud system. Enables real-time monitoring, energy dispatch, and remote diagnostics. Compatible with mainstream SCADA platforms.



Safety First • Liquid Cooling Protection

Utilizes LFP cells (3.2V 314Ah), cycle life >8000 cycles. Equipped with liquid cooling system, dual airflow isolation, and multiple electrical protections. Comprehensive protection against overcurrent, short circuits, and arc faults.



Outdoor-Rated Design • Global Compatibility

Rated IP54 + C4, operational temperature range -20°C ~ +55°C. Factory-integrated, plug-and-play. Complies with IEC international standards, adaptable to global grid environments.

Model	CFE 250H2-PV-ST5
Battery Parameter	
Battery Type	LFP (3.2 V 314 Ah)
Battery System Configuration	2P260S
Battery System Capacity	522.48 kWh
Battery Voltage Range	728 - 949 V
Battery Cycle Life	8,000 cycles (@25 ± 2 °C, 0.5C / 0.5C, 80% DoD)
AC On-Grid	
The Rated Output	250 kW
Overload Capacity	110% continuous; 120% for ≤1 minute.
Rated Voltage	AC 400 V
Rated Output Current	360 A
AC Access Mode	Three - phase four-wire
Isolation Method	Non – isolated
Grid Voltage Range	380 V (-20%~+15%)
Grid Frequency Range	50 Hz / 60 Hz ± 2.5 Hz
Total Harmonic Distortion	≤3% (Full Load)
Power Factor	-0.99 – 0.99
DC Component	≤0.5%
Charge / Discharge Conversion Time	<100 ms
MPPT Parameters	
MPPT Rated Power	252 kW
Number of MPPT Trackers	Four MPPT trackers, 4 x 63 kW
MPPT Efficiency	99%
PV Input Voltage Range	394 – 680 V
Maximum Operating Current	360 A
AC Off - Grid Parameters	
AC Off - grid Voltage	AC400V
AC Voltage Range	AC400V ± 3%
AC Off - grid Frequency	50Hz / 60Hz
Off - grid Output THDU	≤3% (linear load)
Unbalanced Load Capacity	100%
System Parameter	
System Efficiency	>88%
Size (W × D × H)	1,975 × 1,373 × 2,365 mm
Weight	5T
Operating Temperature	-20 to 55 °C
Environment Humidity	0–95% RH (non-condensing)
Work Altitude	<3000m
Protection Level	IP54
Corrosion Protection Level	C4
Cooling Method	Liquid cooling
Fire Suppression System	Aerosol

CFE ESS Co., Ltd.

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