



MAKE ENERGY CLEANER AND MORE EFFICIENT

ESSF Series

Inverter outdoor cabinet



Example: ESS F 0250 B



Key strengths

- / Anti-corrosion grade: C4M , Protection grade: IP54
- / Split design, compatible with lithium and lead-acid batteries, etc., matching mainstream BMS communication protocols, and free combination.
- / External optional air-cooled/liquid-cooled battery system, supporting up to 8 strings of 0.5C/1C battery systems connected at the same time (1-8 strings optional).
- / Flexible configuration of UPS capacity and AC auxiliary power supply according to external power supply requirements of different battery systems.
- / Self-developed EMS, adopts a three-tier IoT architecture and is integrated with router cloud technology, realize the intelligent operation of energy storage system and improve the economic efficiency of the system.
- / Supports multiple modes including dynamic capacity expansion, steady-state capacity expansion, peak-valley arbitrage, and self-consumption.
- / MPS/PCS equipment supports multi-machine parallel connection.
- / Support forklift/crane loading and unloading.

Model interpretation

Model code	Field description	Naming convention
ESS	Energy storage system	ESS stands for energy storage system.
F	Structural form	A : Outdoor cabinet system B : Battery outdoor cabinet C : Container system E : Battery container P : Inverter container F : Inverter outdoor cabinet
0250	System power	The four-digit number represents the system AC output power (in KW) 0500 represents 500KW, 1000 represents 1MW
B	Built-in device type	A stands for MEGA series B stands for MPS series C stands for PMAE series D stands for PMDE series

Product family

		
ESSF0030A / ESSF0030B / ESSF0050A / ESSF0050B ESSF0100A / ESSF0150A	ESSF0100B / ESSF0150B / ESSF0250A	ESSF0250B

Converter (AC)

Model	ESSF0030A	ESSF0030B	ESSF0050A	ESSF0050B	ESSF0100A	ESSF0150A
Converter model	MEGA0030TS	MPS0030	MEGA0050TS	MPS0050	MEGA0100TS	MEGA0150TS
Rated power (kW)	30		50		100	150
Active power (kW)	30		50		100	150
Rated voltage (V)			400			
Rated current (A)	43		72		144	216
Voltage range (V)			320~460			
Rated frequency (Hz)			50/60			
Frequency range (Hz)			45-55 / 55-65			
THDi (on-grid)			<3%			
THDu (off-grid)			≤1% linear; ≤5% nonlinear			
Power factor			1leading~1lagging(settable)			
Overload capability			110% long-term			
Grid type			3-phase 4-wire + ground (3W+N+PE)			
Isolation transformer			Yes			
On / off-grid switching			Support			

MPPT

Max. PV input voltage (V)	/	1,000	/	1,000	/	/
Max. PV power (kW)	/	36/72	/	60/120	/	/
MPPT operating voltage range (V)	/	250~850	/	250~850	/	/
Buck-boost mode	/	Support	/	Support	/	/

General

Structure type	Two cabin outdoor cabinet					
Dimensions W *D *H (mm)	1,600*1,370*2,385					
Net weight(Includes converter)(kg)	≈1,690	≈1,720	≈1,800	≈1,830	≈2,090	≈2,190
Operating temperature (°C)	0 ~ +45					
Relative humidity	0 ~95% (non-condensing)					
Ingress protection	IP54					
Anti-corrosion grade	C4M					
Noise emission (dB)	<75					
Max. operating altitude (m)	5,000(>3,000 derating)					
Cooling	Air cooling					
Display	7" device display +10" EMS display +10" BMS display (configurable)					
EMS communication	RS485, TCP/IP					

Applications

» Off-grid area

» Areas without electricity(power shortage)

» Remote rural area

Product family

Converter (AC)

Model	ESSF0100B	ESSF0150B	ESSF0250A	ESSF0250B
Converter model	MPS0100	MPS0150	MEGA0250TS	MPS0250
Rated power (kW)	100	150	250	
Active power (kW)	100	150	250	
Rated voltage (V)	400			
Rated current (A)	144	216	361	
Voltage range (V)	320~460			
Rated frequency (Hz)	50/60			
Frequency range (Hz)	45-55 / 55-65			
THDi (on-grid)	<3%			
THDu (off-grid)	≤1% linear; ≤5% nonlinear			
Power factor	1leading~1lagging(settable)			
Overload capability	110% long-term			
Grid type	3-phase 4-wire + ground (3W+N+PE)			
Isolation transformer	Yes			
On / off-grid switching	Support			




MPPT

Max. PV input voltage (V)	1,000	1,000	/	1,000
Max. PV power (kW)	120/180/240	120/180/240	/	300/360
MPPT operating voltage range (V)	250~850	250~850	/	250~850
Buck-boost mode	Support	Support	/	Support

General

Structure type	Two cabin outdoor cabinet			Three cabin outdoor cabinet
Dimensions W*D*H (mm)	2,000*1,370*2,385			2,735*1,370*2,385
Net weight(Includes converter) (kg)	≈2,150	≈2,250	≈2,650	≈3,250
Operating temperature (°C)	0 ~ +45			
Relative humidity	0 ~95% (non-condensing)			
Ingress protection	IP54			
Anti-corrosion grade	C4M			
Noise emission (dB)	<75			
Max. operating altitude (m)	5,000(>3,000 derating)			
Cooling	Air cooling			
Display	7 " device display +10" EMS display +10" BMS display (configurable)			
EMS communication	RS485, TCP/IP			

Product differences

Structure type	Two-cabin outdoor cabinet		Three-cabin outdoor cabinet
Appearance			
Dimensions W*D*H (mm)	1,600*1,370*2,385	2,000*1,370*2,385	2,735*1,370*2,385
Cabin	1. Electrical compartment, 2. Energy storage converter compartment	1. Electrical compartment, 2. Energy storage converter compartment	1. Electrical compartment, 2. Energy storage converter compartment, 3. PMDE (DC/DC) compartment
Photovoltaic (PV) power line entry hole	Cable entry hole at the bottom of the energy storage converter compartment	Cable entry hole at the bottom of the energy storage converter compartment	PMDE cabinet photovoltaic module compartment bottom cable entry hole
Compatible device models	MEGA0030TS / MPS0030 / MEGA0050TS MPS0050 / MEGA0100TS / MEGA0150TS	MPS0100 / MPS0150 / MEGA0250TS	MPS0250

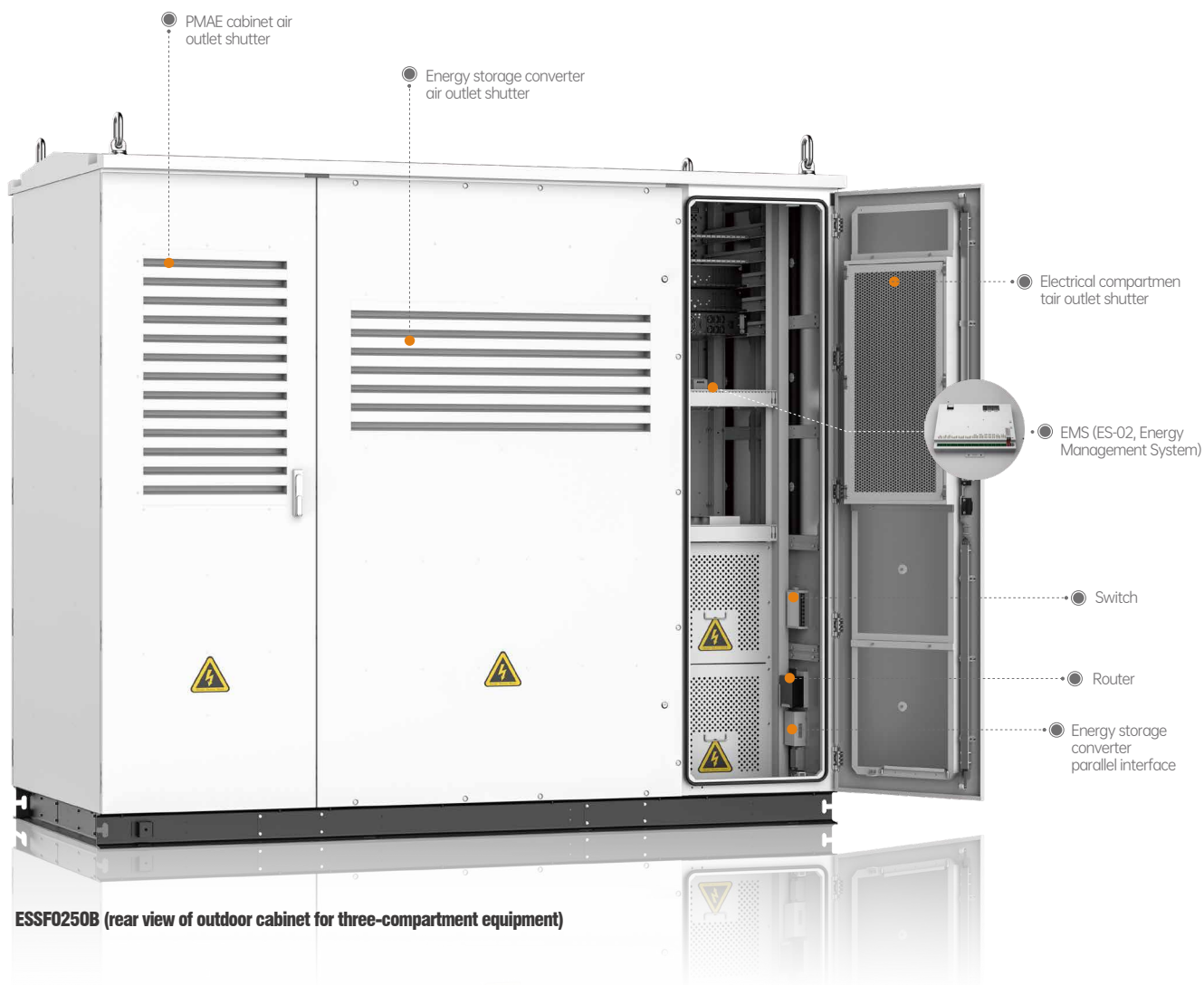
Product introduction



ESSF0250B (three-compartment equipment outdoor cabinet)

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|--|--|--------------------------------------|---|
| ① Hanging ring | ② Indicator Light | ③ EPO emergency stop button | ④ Air intake shutter |
| ⑤ External ground hole | ⑥ Forklift hole position (front / rear / left / right) | ⑦ UPS + battery pack*2 | ⑧ EMS (ES-01, Energy Management System) |
| ⑨ Power distribution control switch in the cabinet | ⑩ External power distribution control switch | ⑪ External battery system bus switch | ⑫ Energy Storage Converter |
| ⑬ DC/DC Modules | | | |

Product introduction



ESSF0250B (rear view of outdoor cabinet for three-compartment equipment)

Optional modules

<div>External battery system converter switch</div> <div>* Flexible configuration according to the number of battery clusters</div>	<div>DC/DC module</div> <div>* Flexible configuration based on PV module capacity</div>	<div>UPS capacity/power reserve capacity</div> <div>* According to the battery system BMS starting power, flexible selection of configuration</div>	<div>Out-of-cabinet distribution control switches</div> <div>* Flexible configuration according to the number of battery clusters</div>
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