

SFR-ES Integrated Energy Storage System



 Uninterruptible power supply

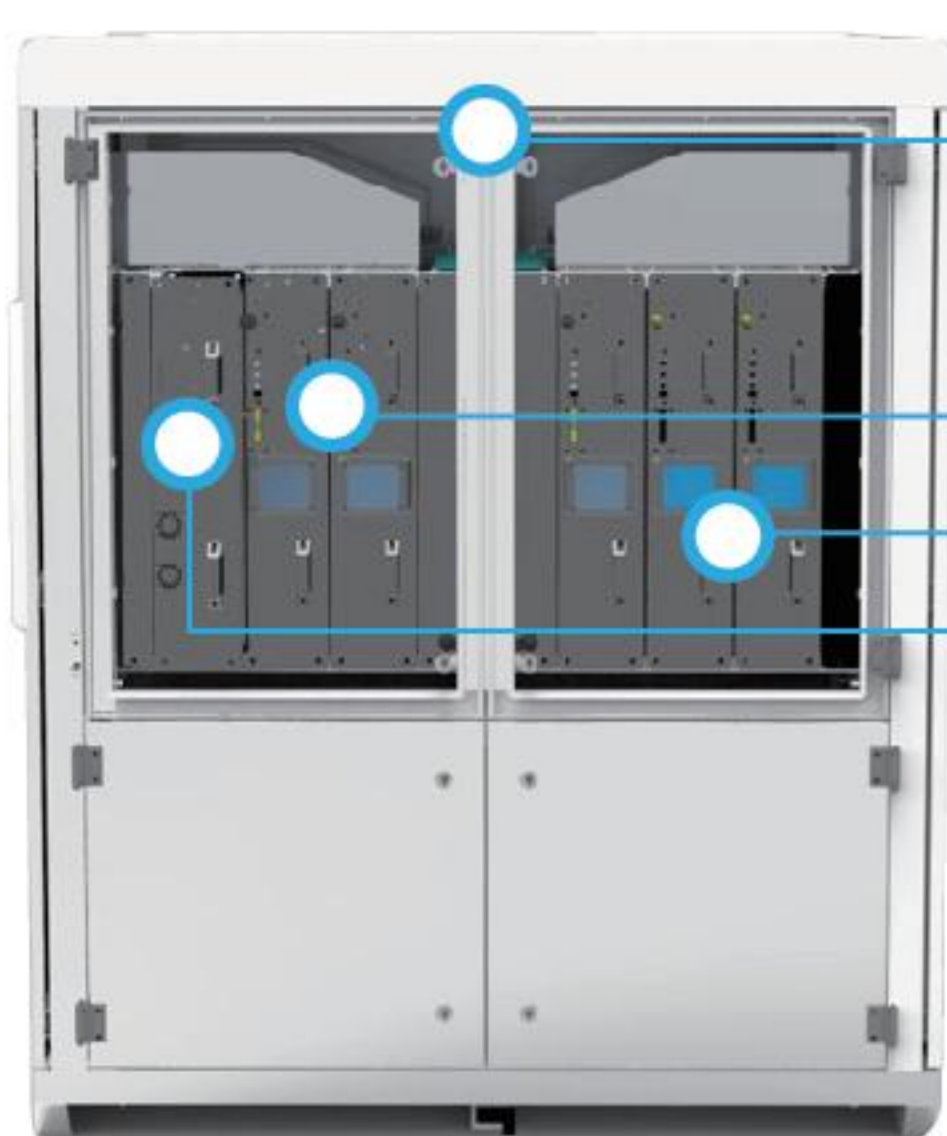
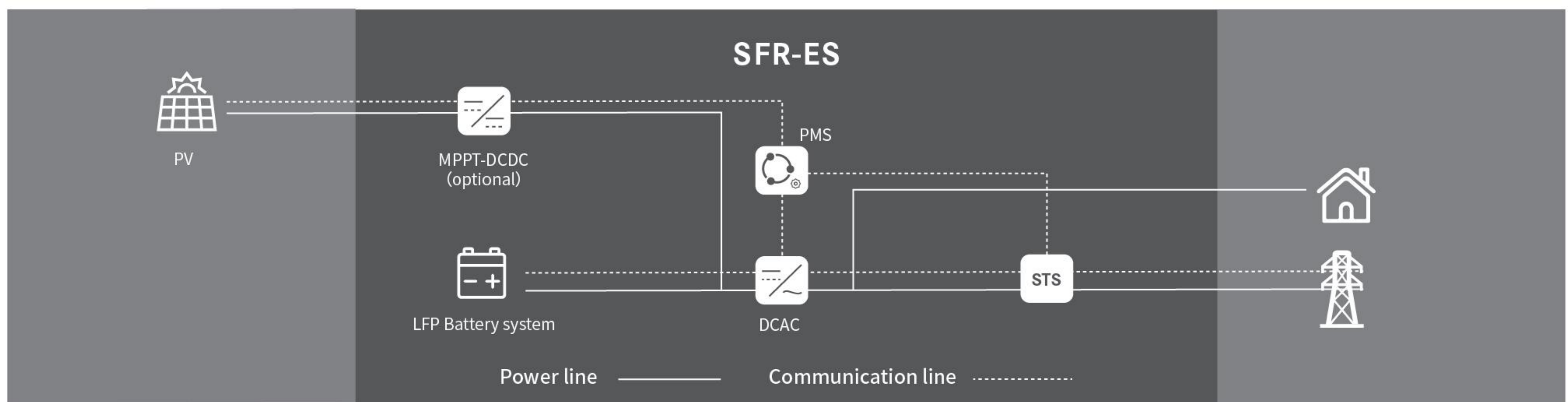
 Peak cut

 Multi-energy integration

 Power quality management

 Dynamic capacity-increase

Working Principle & Structure



Electrical Cabinet

Modular Design

Standard configuration of function modules
Power modules are configured on demand

PCS

Realize AC and DC bidirectional conversion 50kW
standard module design, on-demand configuration

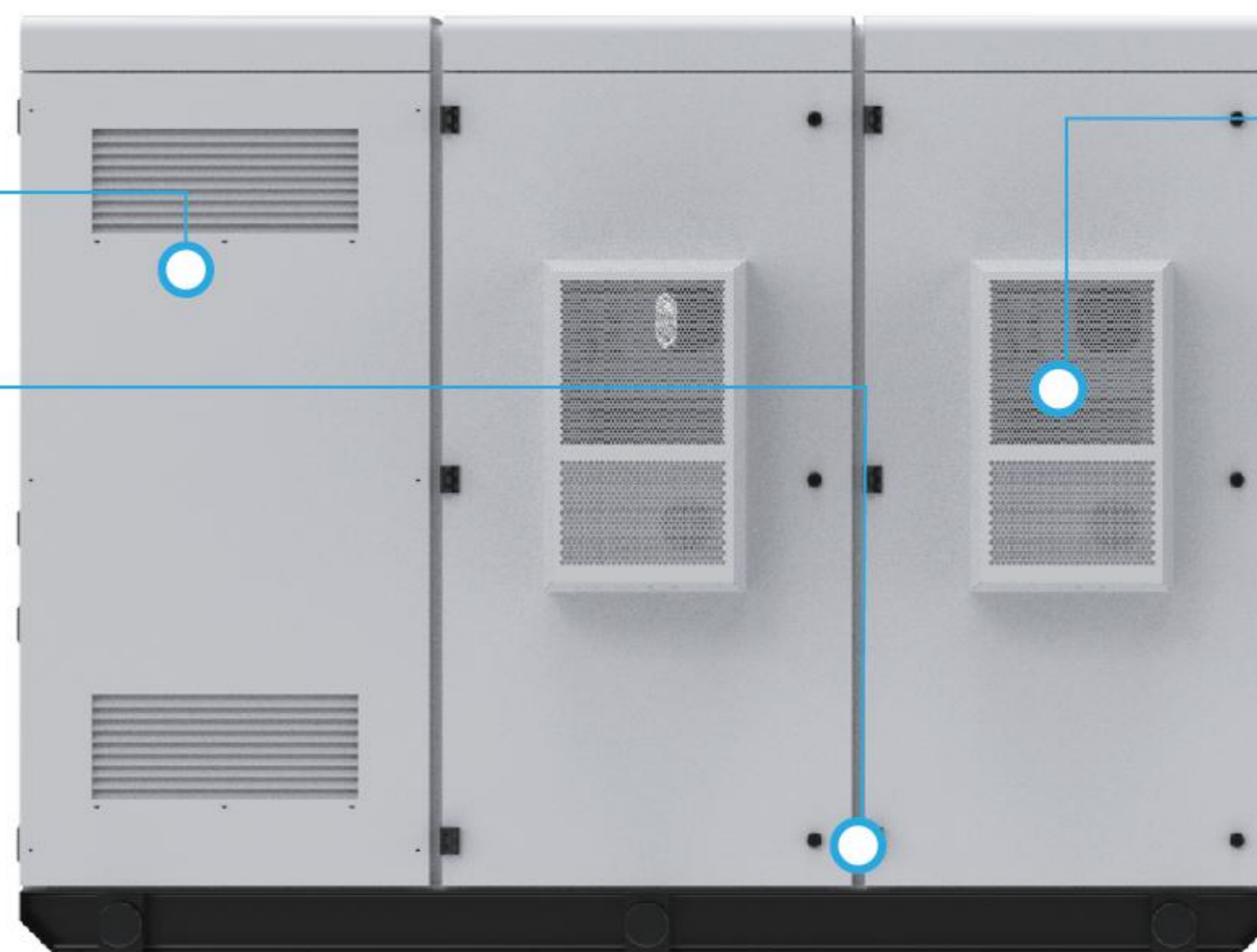
STS

Achieve seamless switch within 15ms
between on & off grid

Solar Controller(MPPT)

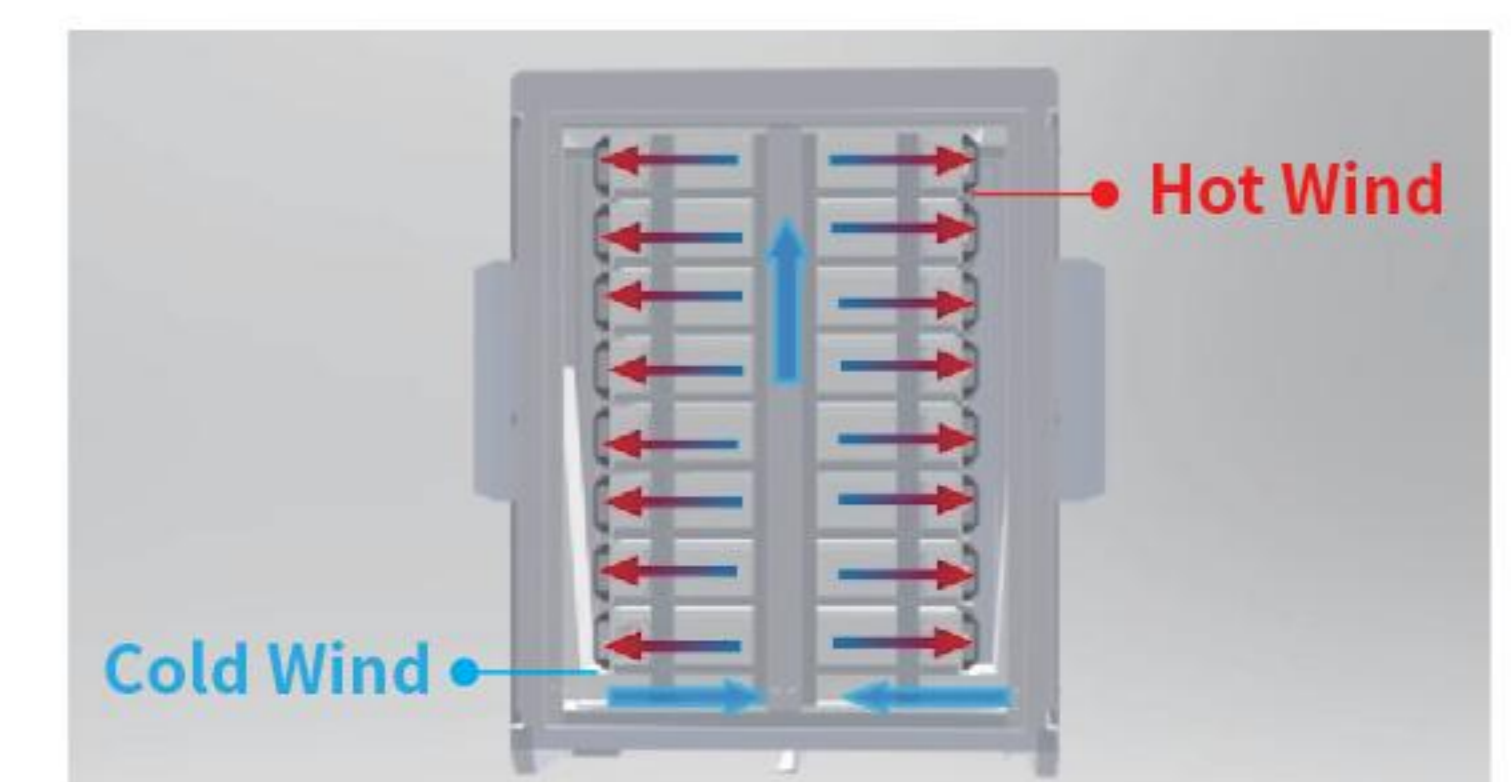
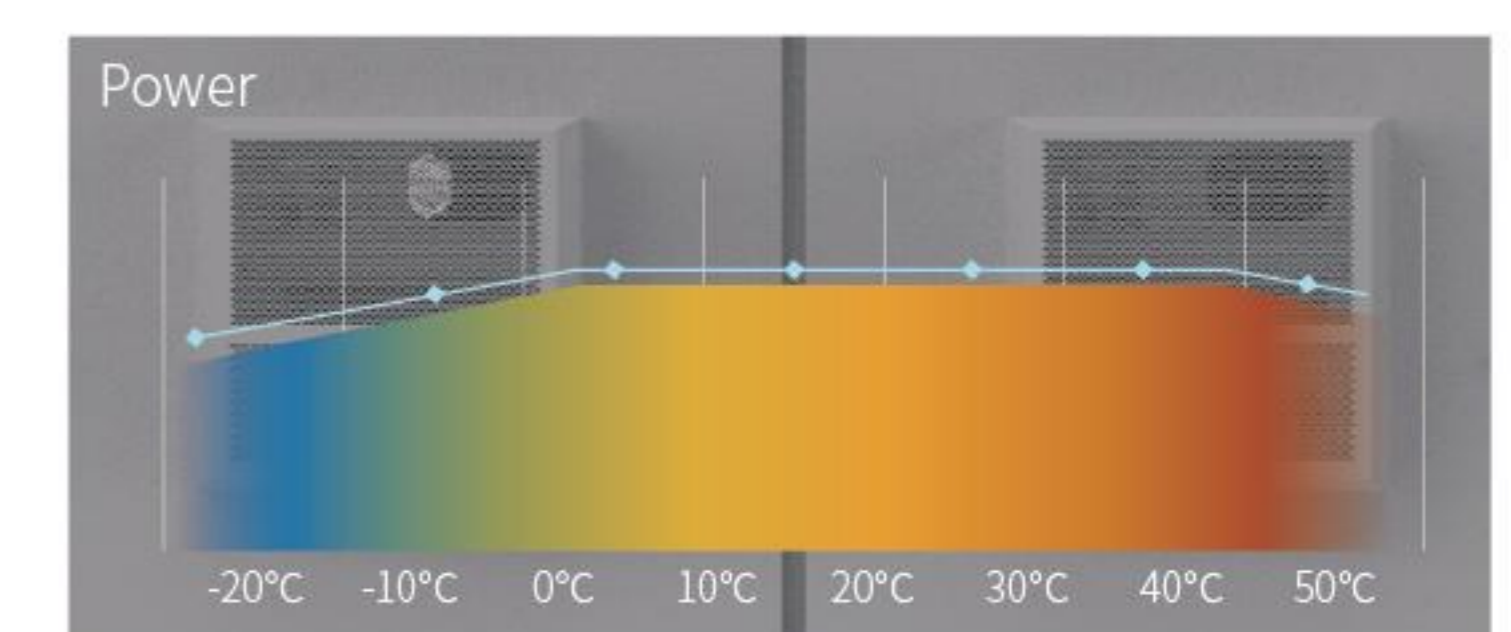
Seamless PV access
50kW Modular design

75kWh /Single Battery Cabinet



Thermal Management

Independent air conditioning design for battery
cabinet -20°C—55°C smooth running



PACK

Built-in BMU system
Rated capacity 100Ah
Rated energy 5.12kWh
CAN Bus communication
Intelligent fan cooling



BMS

Battery SOC, SOH monitoring
Battery parameter monitoring
Battery safety management
Battery communication management
Battery balance management

Parameter



Parameter	SFR-ES-75-50	SFR-ES-150-100	SFR-ES-225-150	SFR-ES-300-200
AC parameters (grid connected)				
Rated output power (kW)	50	100	150	200
Max output power (kW)	55	110	165	220
Rated grid voltage (V)	3W+N+PE, 380			
Grid voltage range	±15%			
Rated grid frequency (Hz)	50/60			
Grid frequency range (Hz)	±2			
Current waveform distortion rate	<3% (Rated power)			
DC component	<0.5%In			
Power factor	>0.99(Rated power)			
Power factor adjustable range	-0.9~+0.9			
Overload capacity	110% Long term			
AC parameters (off grid)				
Rated output power (kW)	50	100	150	200
Max output power (kW)	55	110	165	220
Rated grid voltage (V)	3W+N+PE, 380			
Current waveform distortion rate	<3% (Linear Load)			
Rated frequency (Hz)	50			
Overload capacity	110% Long term			
Battery				
Battery type	Lithium iron phosphate			
Energy of each module(kWh)	5.12			
Module qty	15	30	45	60
Total power (kWh)	76.8	153.6	230.4	307.2
Running Time (h)	1.5 (Optional by changing module qty)			
Cyclelife	25 °C 0.5C/0.5C 100%DOD EOL80% ≥ 4000 times			
System efficiency				
Max efficiency	95%			
Protection				
DC switch	YES			
AC switch	YES			
Grid monitoring	YES			
Surge protection	DC/AC 2nd level			
Basic parameters				
Dimension (W*D*H) (mm)	1680*1500*1700	1680*2270*1700	1680*3050*1700	1680*3830*2300
Weight (kg)	1395	2470	3545	4620
Isolated transformer	NO			
On/off grid switching	STS			
Protection	Outdoor IP54			
Working temperature	-20~55 °C (>45 °C derating)			
Relative humidity	0~95% (no condensing)			
Cooling	Intelligent air cooling (intelligent heating optional)			
Max working altitude(m)	4000 (>2000 derating)			
Display	Touch screen			
Communication	RS485、CAN、LAN			
Communication protocol	Modbus-RTU、Modbus-TCP、CAN2.0B			