

risen

Helix Series Intelligent Multi-Source Microgrid System



PV-ESS-DG Integration

Supports simultaneous input from multiple power sources (grid power, PV, storage, diesel generator).

Flexible Configuration

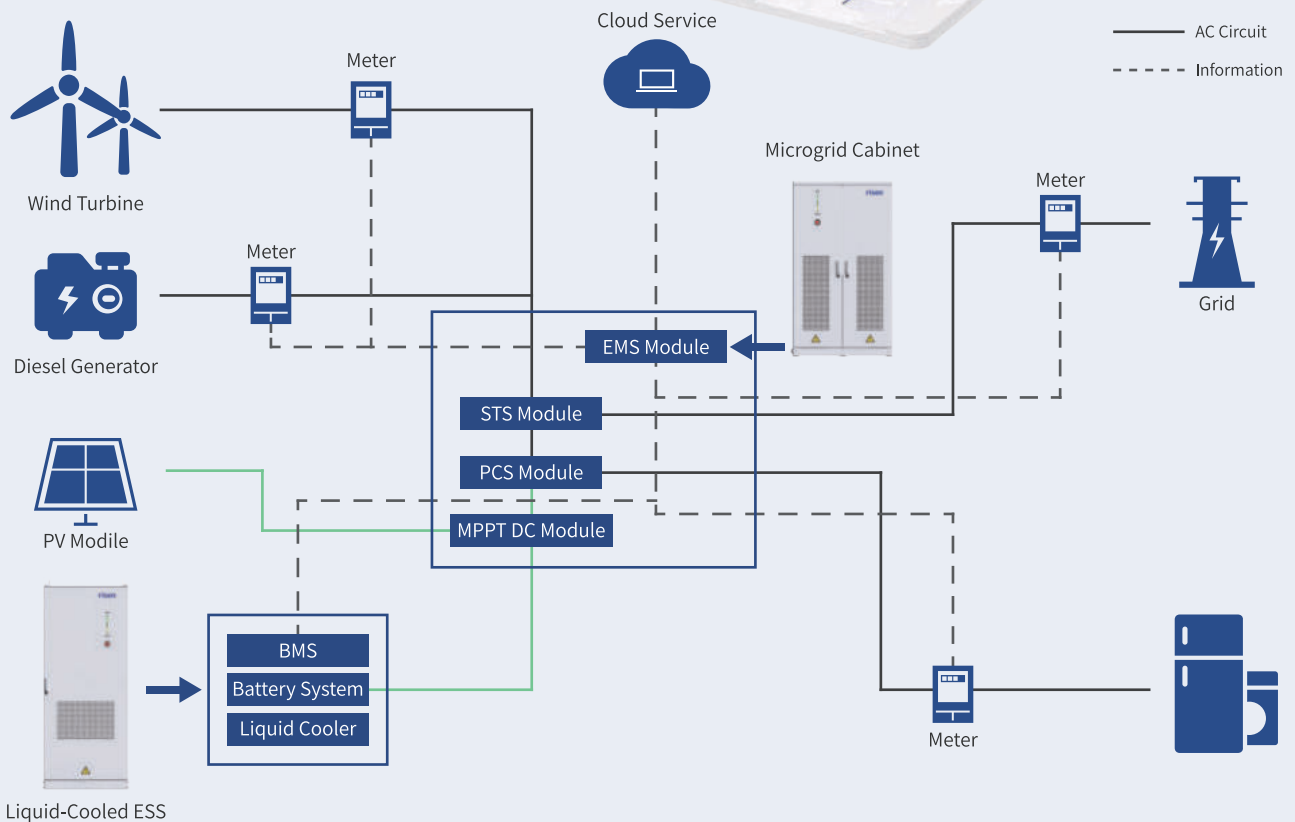
Modular design enables flexible system capacity expansion and reconfiguration;
Scenario-specific solution customization to address diverse requirements;
Seamless grid-tie/off-grid mode switch (<10ms) ensures continuous and stable power supply.

Cost-effective

PV-storage DC coupling boosts photovoltaic power generation efficiency;
Tailored energy management strategies optimize energy costs and enhance economic benefits.

Intelligent Operations

Proactive self-diagnosis and intelligent alarm enable quick troubleshooting of potential issues;
Smart Energy Management Platform provides real-time system monitoring and decision support to improve operational efficiency.



Technical Specification

Microgrid Cabinet	SP125ELL03	SP125ELL04	SP125ELL05	SP125ELL06	SP125ELL07	SP125ELL08	SP125ELL09
System Configuration	PCS+STS	PCS+MPPT*1	PCS+MPPT*2	PCS+MPPT*3	PCS+MPPT*1+STS	PCS+MPPT*2+STS	PCS+MPPT*3+STS
Basic Parameters							
Degree of Protection	IP54						
Built-In Isolation Transformer	Optional Configuration						
Generator Set Connection	Support						
Cooling Method	Intelligent Air Cooling						
Operating Temperature Range	-30~55°C (> 45°C, Derating)						
Storage Temperature Range	-30~70°C (No Condensation)						
Relative Humidity	0~95% (No Condensation)						
Noise Emission	<75dB(A) @ 1m						
Maximum Operating Altitude	3000m (> 2000m Derating)						
AC Lightning Protection Level	Type II						
PV DC Lightning Protection Level	Type II						
Communication Protocol	RS485 / CAN / Modbus / 4G / WLAN / Ethernet						
Dimensions (W*H*D)	1000*1000*1960mm						
Weight	1t (Approximately)						
PV Input (DC)							
Input Voltage Range	150-1000V						
Full-Power MPPT Voltage Range	340-1000V						
Maximum Number of Modules	1	2	3	1	2	3	
Maximum PV Power	60kWp (60kW*1)	120kWp (60kW*2)	180kWp (60kW*3)	60kWp (60kW*1)	120kWp (60kW*2)	180kWp (60kW*3)	
Single-Module MPPT Mode	4						
The Maximum Number of Series Strings for Each MPPT Input	1						
The Maximum Current of Each MPPT	45A						
The Maximum Power of Each MPPT	15kW						
Battery Input (DC)							
Input Voltage Range	600-1000V						
Maximum Input Channels of The Battery	2						
Max. Charge and Discharge Current	216A						
Max. Charge and Discharge Power	125kW						
On Grid (AC)							
Max. Input Capacity	250kVA						
Rated Output Capacity	125kVA						
Rated AC Voltage	400V						
Range of AC Voltage	300-460V						
AC Grid Frequency	50Hz / 60Hz						
Output Frequency Range	45-55Hz / 55-65Hz						
Rated Output Current	182A						
Max. Input Current	364A						
Adjustable Power Factor Range	>0.99 (-0.8~0.8)						
Current Harmonic	<3% (@Rated Power)						
Connection Type	3W+N+PE						
Off Grid (AC)							
Rated Output Power	125kW (@Resistive Load)						
Rated Output Voltage	400V						
Rated Output Current	182A						
Rated Frequency	50Hz / 60Hz						
Voltage Harmonic	<3% (@Linear Load)						
Overload Capacity	120%-1min						
STS							
Rated Grid-Side Power	250kW	/				250kW	
Rated Grid-Side Current	380A					380A	
PCS-Side Power	125kW					125kW	
Load Power	125kW					125kW	
Rated Grid Voltage	380V/400V					380V/400V	
Grid Voltage Range	±15%					±15%	
Rated Grid Frequency	50Hz					50Hz	
Grid Frequency Range	±5Hz					±5Hz	
Long-Term Overload Capacity	110%					110%	
On-Grid/ Off-Grid Switching Time	<10ms					<10ms	
Connection Mode	3W+N+PE					3W+N+PE	
Maximum Efficiency	99.50%					99.50%	

Microgrid Cabinet	SP125ELL03	SP125ELL04	SP125ELL05	SP125ELL06	SP125ELL07	SP125ELL08	SP125ELL09
System Configuration	PCS+STS	PCS+MPPT*1	PCS+MPPT*2	PCS+MPPT*3	PCS+MPPT*1+STS	PCS+MPPT*2+STS	PCS+MPPT*3+STS
ATS (Optional)							
Rated Current				400A			
Rated Voltage				AC 400V			
Minimum Conversion Action Time				≤100ms			
Connection Mode				3P			
Operating Temperature Range				-30~70°C			
Isolation Transformer (Optional)							
Rated Capacity				125kVA			
Rated Input Voltage				400V			
No-Load Output Voltage				400V (+2%, -2%)			
Load Output Voltage				400V (+2%, -2%)			
Rated Current				180.4A			
Rated Frequency				50 / 60Hz			
Temperature Rise				≤100K			
Connection Group				Dyn11			
Efficiency				> 97.5%			
Voltage Resistance				≤10mA, 2500VAC 60S			
Ir				> 100MΩ, 500VDC 60S			
Noise				≤65dB			
Weight				470kg			
Dimensions (W*H*D)				620±10*630*450±10			
Temperature Protection				NTC / 160°C Normally Closed Temperature Switch			
EMS							
CPU				ARM Platform, Quad Core, 2.0GHz Frequency			
Memory				4GBLPDDR4			
Operating System				Linux			
Store. Exe				32GB eMMC / 240G~500GSSD / 32GSD (Optional)			
Communication Interface				LAN*3 / CAN*3 / RS485*5 / USB*2			
Communication Protocol				MQTT / ModbusTCP / IEC61850			
Liquid-Cooled ESS				SR261KFE320			
System Information							
Rated Capacity				261kWh			
Rated Voltage				832V			
Voltage Range				728~949V			
Charge and Discharge Rate				0.5C			
Depth of Discharge (DoD)				98.00%			
Battery Information							
Cell Type				LFP			
Cell Capacity				314Ah			
Configuration				260S1P			
Operating Environment							
Protection Degree				IP55			
Noise				<75dB@1m			
Operating Temperature Range				-30°C~55°C			
Relative Humidity				0~95% (Without Condensation)			
Max. Operating Altitude				3000m (> 2000m Derating)			
Anti-Corrosion Degree				Overseas Version(C4) China Version(C3)			
General Data							
Dimensions (W*H*D)				Overseas Version(1050*2450*1520mm) China Version(1000*2500*1450mm)			
Weight				Overseas Version((Approximately 2.6t) China Version((Approximately 2.5t)			
Cooling Type				Intelligent Liquid Cooling			
Fire Suppression System				Aerosol+Water+ PACK-level Fire Protection (Optional)			
Communication Protocol				CAN / RS485			

SYL(Ningbo)Battery Co.,Ltd.