



Luster Solar

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LS101/106/111/115/120/ 124/129CP-50HV

Preliminary

Battery Outdoor Cabinet / AC Outdoor Cabinet



LS129CP-50HV Series

Product description



KEY FEATURES

1、 Scalable Configuration

- Covering wide power range from 50 kW to 1 MW
- 2-5 hours for a variety of configuration options

2、 Easy Installation

- Outdoor cabinet design , easy for transportation and on-site installation
- C5 anti-corrosion grade to meet off-shore scenarios

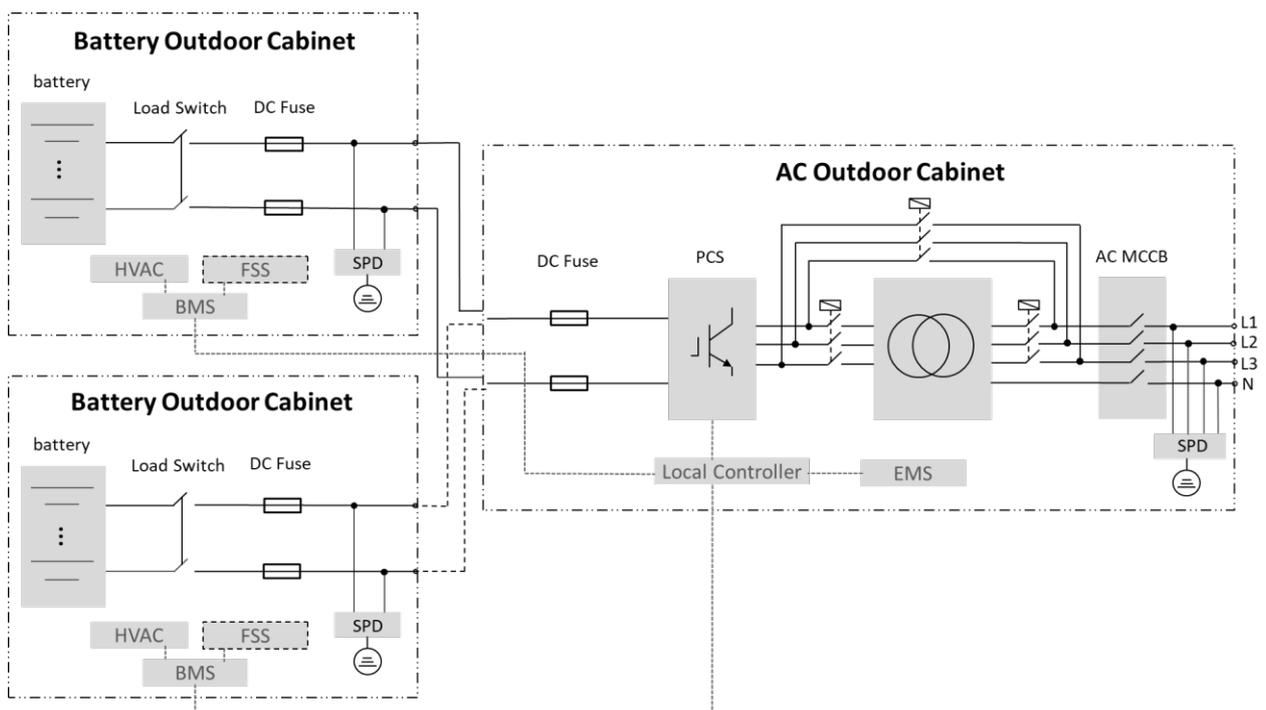
3、 Smart & Friendly

- Cloud technology enables remote maintenance and monitoring
- Built-in EMS,multiple operation mode selection increasing revenue

4、 Economic & Reliable

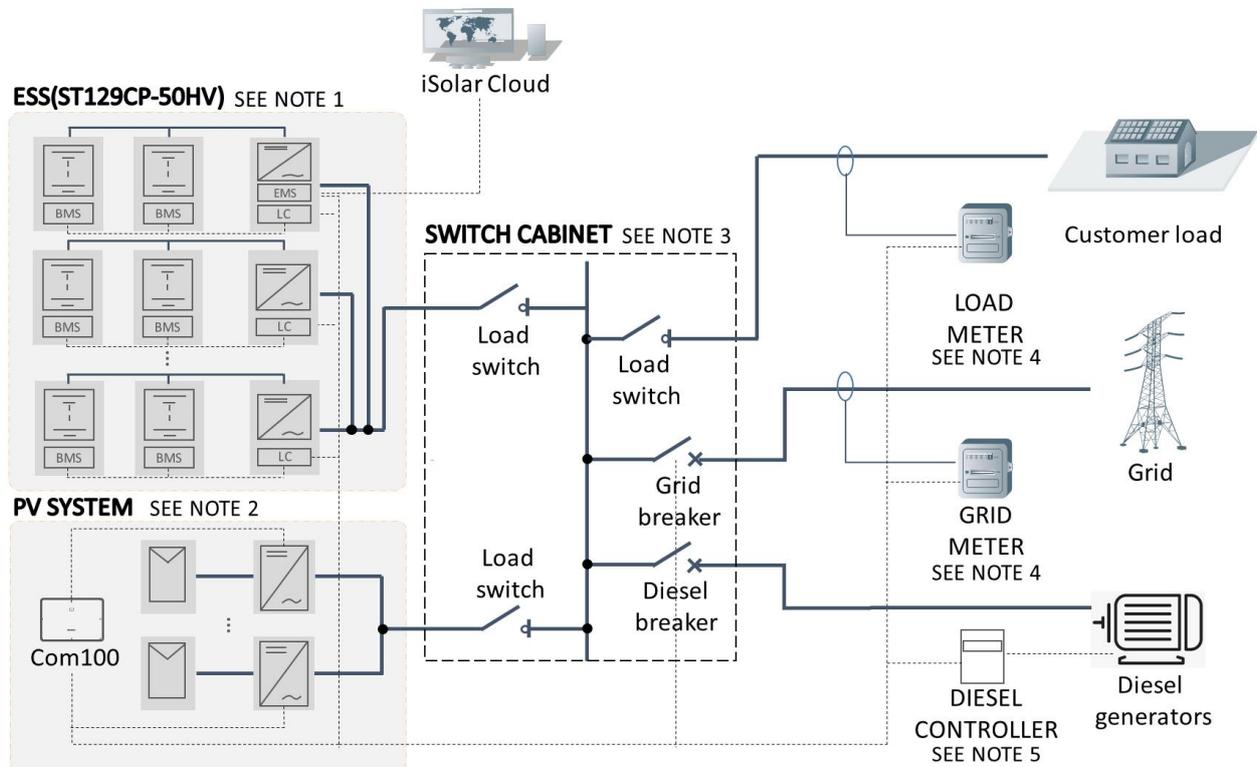
- 100% DOD, 15 years performance life under standard conditions
- Efficient thermal management design, linkage protection to ensure system safety

CIRCUIT DIAGRAM





SYSTEM LAYOUT



Note:

1. Off-grid , support up to 6 sets of BESS (ST129CP-50HV) in parallel until now. A version supporting 20 devices in parallel will be launched later
Grid-connected, 20 devices are allowed to be used in parallel, but when more than 8 units are connected in parallel, customers need to add additional AC parallel cabinets, because the ampacity of the copper bus limits the power to 400kW
2. When multiple photovoltaic inverters are connected in parallel (the number of inverters is greater than 1), COM100 data acquisition equipment must be installed.
3. The customer needs to provide the switch cabinet and all the built-in components, including Load Switches for PV, ESS, Load. In addition, two circuit breakers that can be controlled by the EMS through dry contacts are required to separately disconnect the diesel generator and the grid.
4. The meter needs to be installed on the load side and the grid side respectively, and can communicate with the EMS. The installation location is shown in the figure.
5. Diesel generator should have its own controller and support automatic synchronization function, EMS can control the diesel generator via the generator controller; If this requirement cannot be met, at least dry contacts should be supported to control start-stop the generator.



PARAMETERS TABLE

Battery Outdoor Cabinet Data	LS101CP	LS106CP	LS110CP	LS115CP	LS120CP	LS124CP	LS129CP
Battery Type	LiFePO ₄ Prismatic Cell						
Battery Module	4.6kWh,40kg						
Battery Module Number	22modules	23modules	24modules	25modules	26modules	27modules	28modules
Nominal Energy	101.3 kWh	105.9 kWh	110.5 kWh	115.2 kWh	119.8 kWh	124.4 kWh	129.0 kWh
Nominal voltage	844.8 V	883.2 V	921.6 V	960.0 V	998.4 V	1036.8 V	1075.2 V
Operating voltage	712.8–963.6V	745.2-1007.4V	777.6–1051.2V	810.0–1095.0V	842.4–1138.8V	874.8–1182.6V	907.2–1226.4V
Max. charging/discharging rate	≤0.5C						
Depth of discharge	100%						
Dimensions (W*H*D)	1300*2400*1000 mm						
Weight	2360 kg	2400 kg	2440 kg	2480 kg	2520 kg	2560 kg	2600 kg
Installation Location	Outdoor						
Degree of protection	IP54						
Anticorrosion grade	standard C5 (optional C4)						
Allowable relative humidity range	0% to 95% (non-condensing)						
Auxiliary power supply	Default external power supply, internal power supply optional						
Operating altitude	standard 2000m, max. 3000 m						
Cooling concept	Heating, ventilation and air conditioning						
Certificates	IEC62619, IEC62477, IEC62040, IEC61000, UN38.3						
AC Outdoor Cabinet Data	SC50UD						
Nominal AC power	50 kVA						
Round-trip efficiency	86.54%(0.5C) , 88.37%(0.25C)						
Max. THD of current	< 3 % (at nominal power)						
DC component	< 0.5 % (at nominal power)						
Nominal grid voltage	400 V						
Grid voltage range	360 – 440V						
Nominal grid frequency	50 Hz						
Grid frequency range	45 – 55 Hz						
Isolation method	Transformer						
Dimensions (W * H * D)	1000*2400*1000 mm						
Weight	1500 kg						
Degree of protection	IP54						
Anticorrosion grade	standard C5 (optional C4)						
Communication interfaces	RS485, Ethernet						
Communication protocols	Modbus RTU, Modbus TCP						