

# ESS-GRID FlexiO series

Resilient, Reliable and Quick Delivery Microgrid system



ESS-GRID FlexiO is an air-cooled industrial/commercial battery solution in the form of a split pcs and battery cabinet with 1+N scalability, combining solar photovoltaic, diesel power generation, grid and utility power. It is suitable for use in microgrids, in rural areas, in remote areas, or in large-scale manufacturing and farms, as well as for charging stations for electric vehicles.



964 - 3856kWh



375 - 1000kW



0.5C



716.8 - 768Vdc

# Faster Maintenance

Easy replacement of damaged battery cabinets



## Modular design, Flexible configuration

Max. 241kWh for a single machine, supports parallel connection of multiple machines, easily realizes MWh level expansion, flexible configuration, quick replacement.



## Smart EMS, Adaptive Control

The system utilizes pre-set logic algorithms to manage DC coupling, effectively reducing dependence on the EMS energy management system and thus reducing overall cost of use.



## Highly integrated, Easy to install

Battery cabinets (BMS, EMS, FSS, TCS, IMS), DC/DC, DC/AC, with factory configurations made in advance, reduce the difficulty of system integration for C&I storage customers.



## High Performance, Long Life

The battery section adopts the advanced LFP module patent technology, with a clear system hierarchy to improve energy efficiency. The cycle life is more than 6000 @ 80% DOD, and the service life is more than 10 years.

# Flexible and Scalable to Your Needs

## 200-241kWh Battery Cabinet

Fire Suppression System (FSS)  
Temperature Control System (TCS)  
Intelligent Monitoring System (IMS)  
Battery Management System (BMS)



Easy to expand

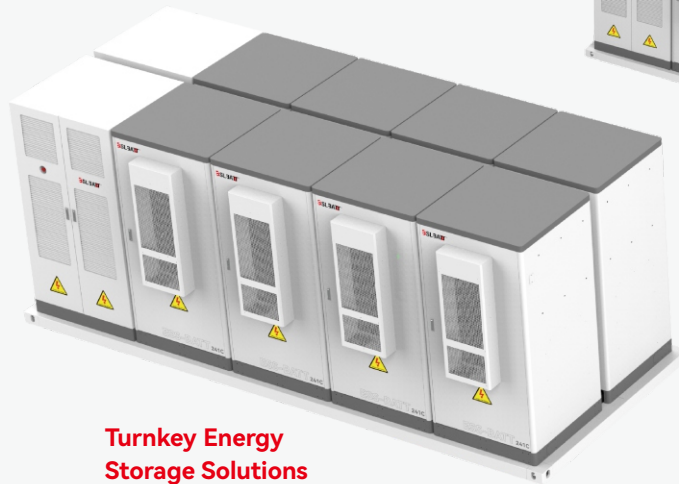


## Intelligent Power Conversion System (PCS)

## Energy Management System (EMS & 3D HMI)



500kW / 1928kWh



## Turnkey Energy Storage Solutions



Easy to layout



Easy to transport



Easy to install



Easy to maintain



Easy to scale up  
or expandable



## P500E DC/AC 500kW

- 375 / 500kW Rated Power
- Integrated STS and Transformer Module

The P500E has a modular design with a built-in STS and transformer. With the P500E, you can transfer energy bi-directionally to the battery, grid and DG, helping you to achieve more functionality and maximise the benefits of your energy storage system.



## P500L DC/DC 500kW

- 300 / 350 / 375 / 400 450 / 500kW Rated Power
- Maximum built-in 10 MPPTs

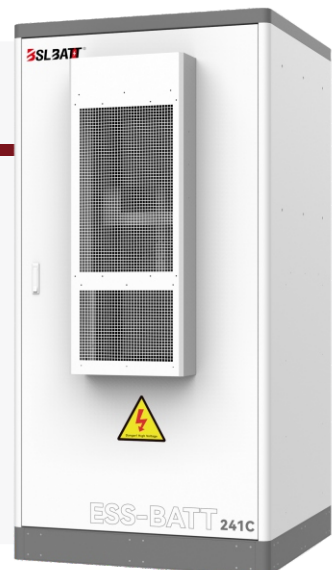
The P500L has a modular design and its main role is to convert the DC power generated by the PV panels into AC power for integration into the grid or for local use. At the same time, the P500L is equipped with features such as Maximum Power Point Tracking (MPPT) to maximise the efficiency of the PV system.



## ESS-GRID 241C 241kWh Battery Cabinet

- 200 / 215 / 225 / 241kWh Capacity Selection
- Integrated FSS, TCS, IMS, BMS All-in-one

ESS-BATT Cubicon Series battery system is engineered to meet the vast energy demands of industrial and commercial enterprises. As the most powerful model in BSLBATT's acclaimed ESS-GRID series, the system offers unmatched energy storage capacity, ensuring a reliable and continuous supply of power for demanding applications.



### DC/DC CABINET

Model	ESS-GRID P500L
<b>AC (GRID-CONNECTED)</b>	
Photovoltaic (DC/DC) Power Rating	500kW
PV DC Voltage Range	312V~500V
PV Maximum DC Current	1600A
Number Of PV MPPT Circuits	10
Protection Grade	IP54
Protection Grade	I
Display	Touch LCD touch screen
Relative Humidity	0~95% (non-condensing)
Noise Level	Less than 78dB
Ambient Temperature	-25°C~60°C (Derating above 45°C)
Cooling Method	Intelligent air cooling
EMS Communication	Ethernet / 485
Dimension (W*D*H)	1300*1000*2300mm
Weight (With Battery Approx.)	500kg

### BATTERY CABINET PARAMETERS

Model	ESS-BATT 241C
Rated Battery Capacity	241kW
Rated System Voltage	768V
System Voltage Range	672V~852V
Cell Capacity	314Ah
Battery Type	LiFePO4 battery (LFP)
Battery Series-parallel Connection	1P*16S*15S
Maximum Charge/Discharge Current	157A
Protection Grade	IP54
Protection Grade	I
Cooling And Heating Air Conditioning	3kW
Noise Level	Less than 78dB
Cooling Method	Intelligent air-cooling
BMS Communication	CAN
Dimension (W*D*H)	1150*1100*2300mm
Weight (With Battery Approx.)	1800kg

The system uses 5 clusters of 241kWh batteries for a total of 1.205MWh

### DC/AC CABINET

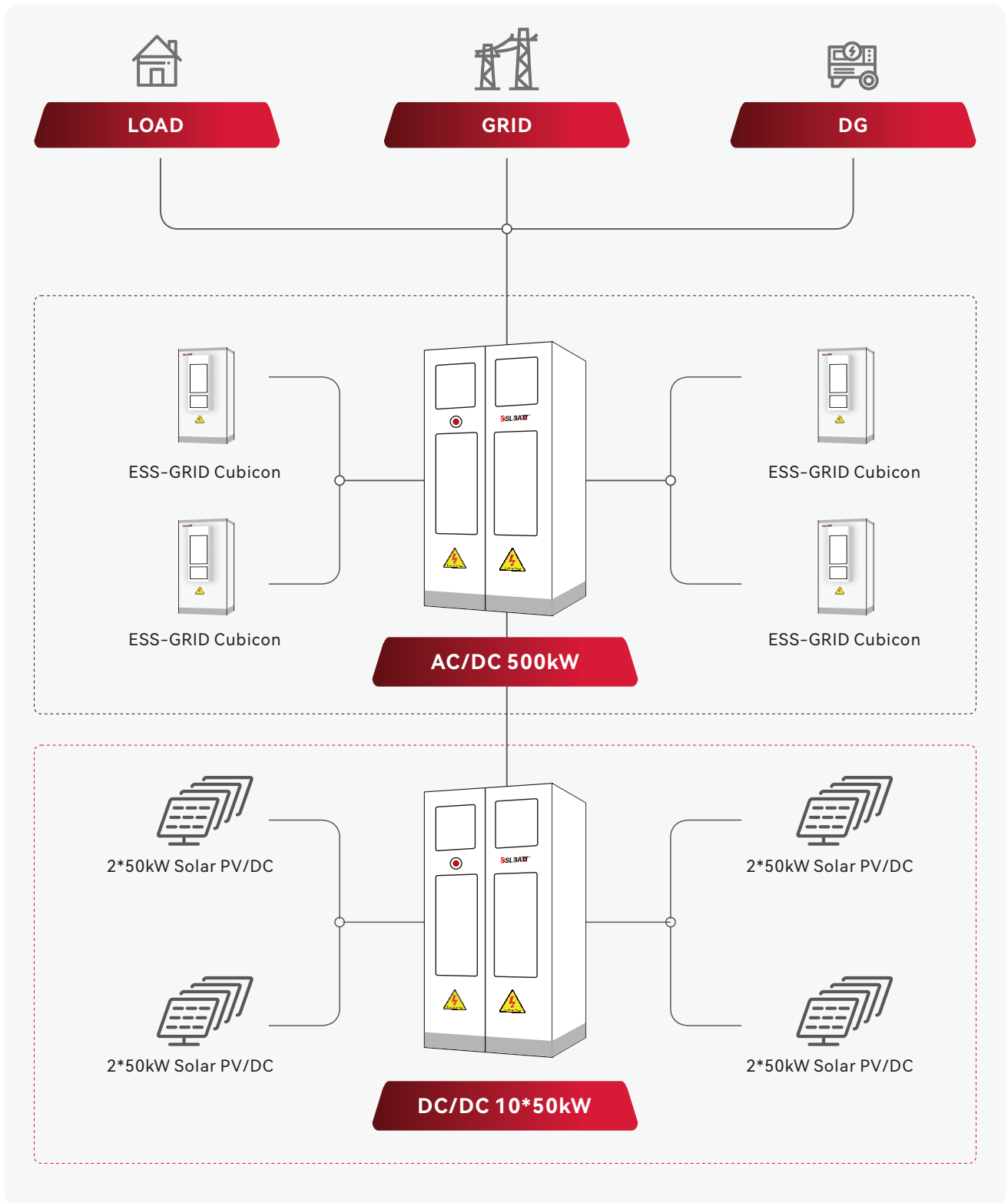
Model	ESS-GRID P500E
<b>AC (GRID-CONNECTED)</b>	
PCS Rated AC Power	500kW
PCS Maximum AC Power	550kW
PCS Rated AC Current	720A
PCS Maximum AC Current	790A
PCS Rated AC Voltage	400V, 3W+PE/3W+N+PE
PCS Rated AC Frequency	50/60±5Hz
Total Harmonic Distortion Of Current THDI	<3% (rated power)
Power Factor	-1 overrun ~ +1 hysteresis
Voltage Total Harmonic Distortion Rate THDU	<3% (linear load)
<b>AC (OFF-GRID LOAD SIDE)</b>	
Load Voltage Rating	400Vac, 3W+PE/3W+N+PE
Load Voltage Frequency	50/60Hz
Overload Capacity	110% long term operation; 120% 1 minute
Off-grid Output THDU	≤ 2% (linear load)

### DC SIDE

PCS DC Side Voltage Range	625~950V (three-phase three-wire) / 670~950V (three-phase four-wire)
PCS DC Side Maximum Current	880A

### SYSTEM PARAMETERS

Protection Grade	IP54
Protection Grade	I
Isolation Mode	Transformer isolation: 500kVA
Self-consumption	<100W (without transformer)
Display	Touch LCD touch screen
Relative Humidity	0~95% (non-condensing)
Noise Level	Less than 78dB
Ambient Temperature	-25°C~60°C (Derating above 45°C)
Cooling Method	Intelligent air cooling
Altitude	2000m (over 2000m derating)
BMS Communication	CAN
EMS Communication	Ethernet / 485
Dimension (W*D*H)	1450*1000*2300mm
Weight (With Battery Approx.)	1700kg

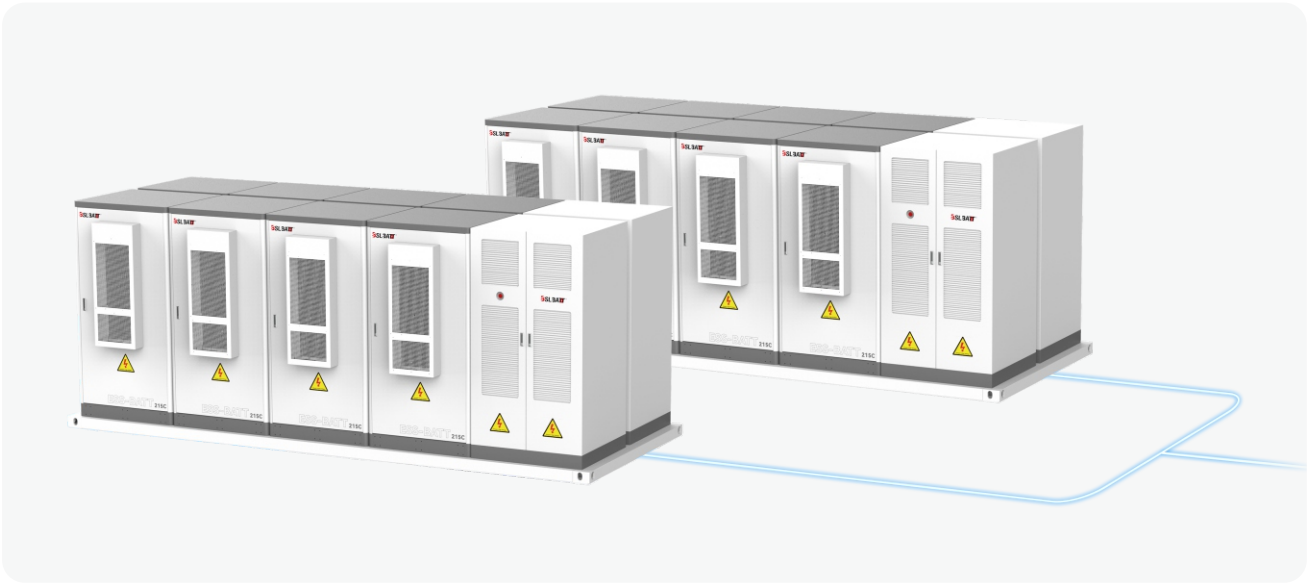


**Enhanced Power Reliability**

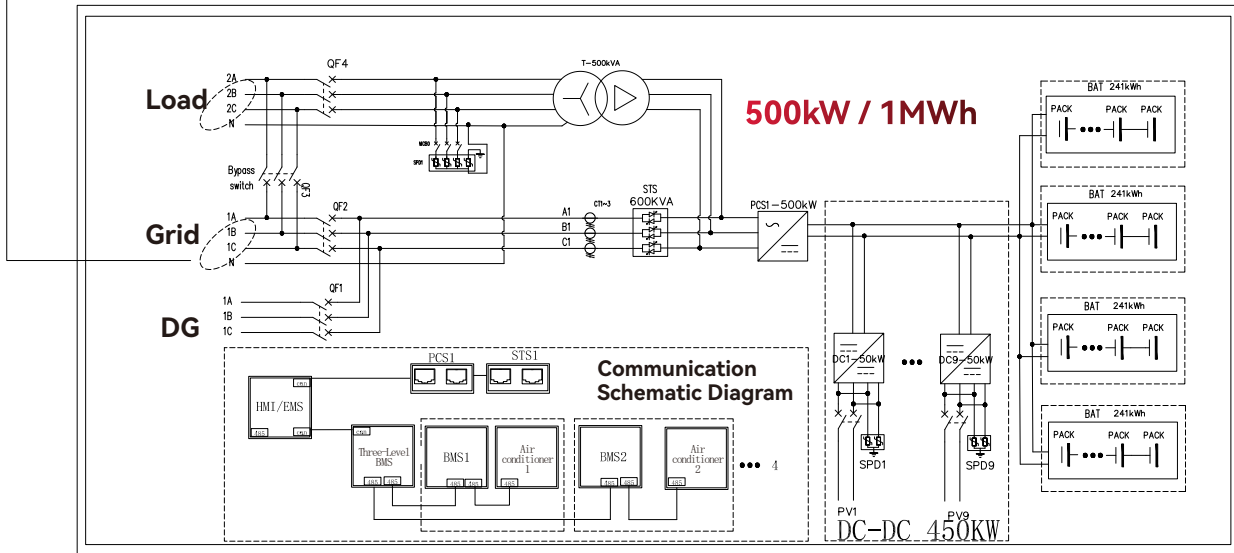
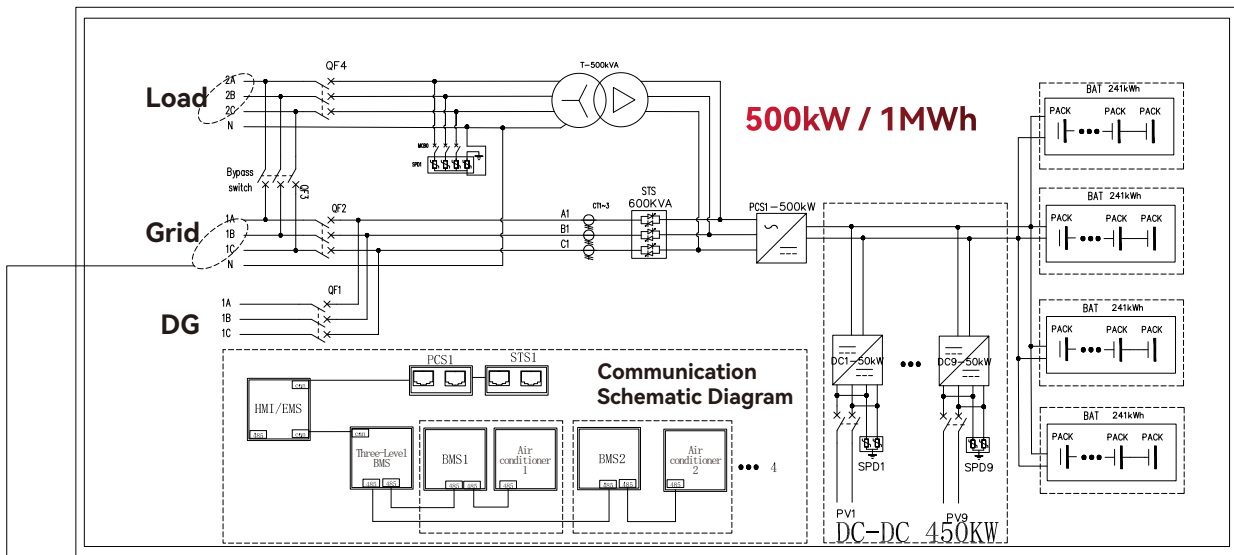
**Reduce peaks and fill valleys**

**Reduce power costs**

**Backup Power**



**2 Systems in parallel, Easily expandable to 1MW**





**“Harnessing Energy, Elevating Lives.”**

---

**BSL NEW ENERGY TECHNOLOGY CO., LTD**

[www.bsl-battery.com](http://www.bsl-battery.com)

Call: +86-752-2819-469

E-mail: [inquiry@bsl-battery.com](mailto:inquiry@bsl-battery.com)

Building 2, Area D, Qunyi Intelligent Manufacturing Industrial Park, Tonghu Ecological Intelligence Zone.

Zhongkai, Huizhou, Guangdong, China



Website



Tiktok



Youtube