

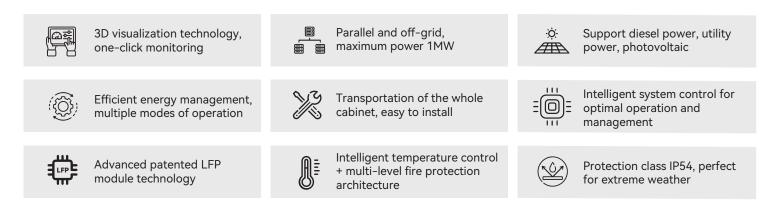
ESS-GRID FlexiO series

Resilient, Reliable and Quick Delivery Microgrid System



500kW / 1MWh

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.





DC PV CABINET		
Model	ESS-GRID P500L	
AC (GRID-CONNECTED)		
Photovoltaic (DC/DC) Power Rating	500kW	
PV (Low Voltage Side) DC Voltage Range	312V~500V	
PV Maximum DC Current	1600A	
Number Of PV MPPT Circuits	10	
Protection Grade	IP54	
Protection Grade	Ι	
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-GRID 241C	
Rated Battery Capacity	241kWh	
Rated System Voltage	768V	
System Voltage Range	360V~620V	
Cell Capacity	314Ah	
Battery Type	LiFePO4 battery(LFP)	
Battery Series-parallel Connection	1P*16S*15S	
Maximum Charge/Discharge Current	157A	
Protection Grade	IP55	
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)	1850*1430*2300mm	
Weight (With Battery Approx.)	3310kg ±3%	

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

AC ENERGY STORAGE CABINETS		
Model	ESS-GRID P500E	
AC (GRID-CONNECTED)		
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)	

AC (OFF-GRID LOAD SIDE)

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