

# Residential ESS

All In One Energy Storage System  
CATL Battery Solutions



CATL LFP Battery, stable and safe  
Module, pack, system, triple protection  
IP65, outdoor installation, away from living room



Modular design, single person can carry and  
install it. Plug and play, 30 min quick installation  
Space saving; 0.15 sq. m foot print



Global cloud platform & Mobile APP  
anytime and any where  
Open API, support power internet applications

Battery Model		HEC-S B 5K	
<b>Physical</b>		<b>Operation</b>	
Battery type	LFP (LiFePO4)	Max. Charge/Discharge Current	50A/80A
System Weight	54KG	Rated DC power	4096W
Dimension (W x D x H)	540*490*255	Max. Charge/Discharge Power	2825W/4096W
IP Protection	IP65	Operating Temperature Range	0 to 50°C charging -10 to 50°C discharging
Warranty	5 Year Product Warranty	Humidity	0~95% (No condensation)
<b>Electrical</b>		<b>BMS</b>	
Energy Capacity	5.12kwh	Modules Connection	Max. 4
Usable Capacity	4.6kwh	Capacity	100-400Ah
Depth of Discharge (DoD)	90%	Power Consumption	<2W
Nominal Voltage	51.2V	Communication	CAN & RS485
DC Circuit Breaker	125A	Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement
Operating Voltage Range	44.8-56.5V	<b>Certificate</b>	
Internal Resistance	< 20mΩ	Safety(Cell)	
Cycle Life	10000cycle	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973	

\*Maximum 4 battery pack in parallel.

Hybrid Inverter Model	HEC-S 5K
<b>PV String Input</b>	
Max. DC Voltage	580V
Nominal Voltage	400V
MPPT Voltage Range	80V-560V
Start Voltage	130V
Number of MPP Tracker	2
Strings Per MPP Tracker	1
Max. Input Current Per MPPT	15A
Max. Short-circuit Current Per MPPT	18A
<b>AC Output (Grid)</b>	
Nominal AC Output Power	5000W
Max. AC Apparent Power	7360VA (from grid)
Max. AC Output Power	5000W <sup>1</sup>
Nominal AC Voltage	230Vac
AC Grid Frequency Range	50 / 60Hz±5Hz
Max. Output Current	22A <sup>2</sup>
Max. Input Current	32A
Power Factor (cosΦ)	0.8leading-0.8lagging
THDi	<3%
<b>Battery Input</b>	
Battery Type	LFP (LiFePO4)
Nominal Battery Voltage	48V
Charging Voltage Range	40-60V
Max. Charging Current	100A
Max. Discharging Current	100A
Battery Capacity	100-400Ah
Charging Strategy for Li-ion Battery	Depend on the BMS
<b>AC Output (Backup)</b>	
Max. Output Apparent Power	5000VA
Peak Output Apparent Power	6900VA 10sec
Max. Output Current	20A
Nominal Output Voltage	230V
Nominal Output Frequency	50/60Hz
Output THDv (@Linear Load)	<3% (Linear Load)
<b>Efficiency</b>	
Max. PV Efficiency	97.6%
Euro. PV Efficiency	97.0%
<b>Protection</b>	
DC Switch	Bipolar DC Switch (125A/Pole)
Anti-islanding Protection	Yes
Output Over Current	Yes
DC Reverse Polarity Protection	Yes
String Fault Detection	Yes
AC/DC Surge Protection	DC Type II;AC Type III
Insulation Detection	Yes
AC Short Circuit Protection	Yes
<b>General Specifications</b>	
Dimensions W x H x D	540*590*255mm
Weight	32kg
Operating Temperature Range	-25°C ~ +60°C
Noise (dB)	<25
Cooling Type	Natural Convection
Max. Operation Altitude	2000m
Operation Humidity	0~95% (No Condensation)
IP Class	IP65
Topology	Battery Isolation
Communication	RS485/CAN2.0/WIFI/4G
Display	LCD/APP
Certification & Standard	IEC/EN 62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC 60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21;G98;G99;C10/C11

\*1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa.

\*2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.