

BluE ESS

ALL-IN-ONE SOLUTION

Application of energy storage system

Powered by CATL

Lithium Ion batteries have received some negative press in recent years for their use of nickel and cobalt which are mined in countries with a poor record workers rights and use of child labour. There is currently a race to remove these materials from other manufacturers batteries worldwide. The CATL battery has already stopped using these materials and has moved to an LFP chemistry which has 0% cobalt or nickel.This same chemistry is being used in the Tesla Model 3 being supplied to china and the EU.

ALL-IN-ONE

The BLuE ESS includes all the components needed to transform the energy produced by photovoltaic panels into usable energy for household consumption or to store it in the integrated battery and use it in the moment of real world.



TOP PERFORMANCES

Maximum efficiency of energy conversion.
Storage capacity up to 20 kwh



BluE-S Hybrid Inverter

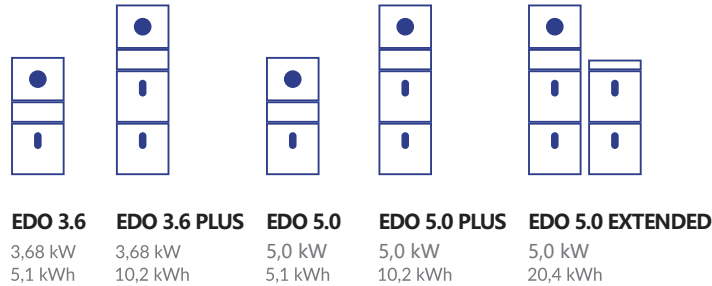


"Plug and Play" - Cable Box



BluE-PACK 5.1

solution	configuration	
	Inverter	Battery Pack
BluE H3-5	Blue-S 3680D	BluE-Pack 5.1
BluE H3-10	Blue-S 3680D	BluE-Pack 10.2
BluE H5-5	Blue-S 5000D	BluE-Pack 5.1
BluE H5-10	Blue-S 5000D	BluE-Pack 10.2
BluE H5-20	Blue-S 5000D	BluE-Pack 20.4



BluE Residential ESS

All In One Energy Storage System

CATL Battery Solutions



Safety



Simple



Interconnection

Battery Model		BluE-PACK5.1	
Physical		Operation	
Battery type	LFP (LiFePO4)	Max. Charge / Discharge Current	50A/80A
System Weight	58KG	Rated DC power	4096W
Dimension (W x D x H)	540*500*240	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, 10 Year Performance Warranty	Humidity	0~95% (No condensation)
Electrical		BMS	
Energy Capacity	5.12kwh	Modules Connection	4
Usable Capacity	4.6kwh	Capacity	100-400Ah
Depth of Discharge (DoD)	90%	Power Consumption	<2W
Nominal Voltage	51.2V	Communication	CAN & RS485
Max. Short-circuit Current (Fuse)	125A	Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement
Operating Voltage Range	44.8-56.5V	Certificate	
Internal Resistance	<20mΩ	Safety(Cell)	IEC/EN 62619;UN38.3
Cycle Life	10000cycle		

*Maximum 4 battery pack in parallel.

Hybrid Inverter Model	BluE-S 3680D	BluE-S 5000D
PV String Input		
Max. DC Input Power (W)	4800	6500
Max. DC Input Voltage (V)	580	580
Nominal voltage (V)	400	400
MPPT voltage range	120V-550V	120V-550V
Startup voltage	130V	130V
MPPT voltage range at full load	184~550V	230~550V
Number of MPPT	2	2
No. of Strings per MPPT	1	1
Max. input current per MPPT	13A	13A
Max. short-circuit current per MPPT	16A	16A
AC Output (Grid)		
Nominal AC output power	3680W	4999W
Max. AC apparent power	7360VA (from grid)	7360VA (from grid)
Maximum AC output power	3680W	4999W
Nominal AC voltage	230Vac	230Vac
AC grid frequency range	50 / 60Hz±5Hz	50 / 60Hz±5Hz
Max. output current	16A	22A
Max. input current	32A	32A
Power factor (cosφ)	0.8leading-0.8lagging	0.8leading-0.8lagging
THDi	<3%	<3%
Battery Input		
Battery Type	LFP (LiFePO4)	LFP (LiFePO4)
Nominal Battery Voltage	51.2V	51.2V
Max. Charging Voltage	57.6V	57.6V
Max. Charging Current	50A	100A
Max. Discharging Current	80A	100A
Battery Capacity	100-400Ah	100-400Ah
Charging Strategy for Li-Ion Battery	Depend on the BMS	Depend on the BMS
AC Output (Backup)		
Max. Output Apparent Power	4000VA	5000VA
Peak Output Apparent Power	6900VA 10sec	6900VA 10sec
Max. Output Current	16A	20A
Nominal Output Voltage	230±0.2%	230±0.2%
Nominal Output Frequency	50/60Hz±0.2%	50/60Hz±0.2%
Output THDv (@Linear Load)	<2% (Linear load) / <2%	<2% (Linear load) / <2%
Efficiency		
Max. PV Efficiency	97.6%	97.6%
Euro. PV efficiency	97.0%	97.0%
Max. Battery to Load Efficiency	94.0%	94.0%
Battery charged by PV Max. Efficiency	98.0%	98.0%
Protection		
DC switch	Bipolar DC Switch (125A/Pole)	Bipolar DC Switch (125A/Pole)
Anti-islanding protection	Yes	Yes
Output over current	Yes	Yes
DC reverse polarity protection	Yes	Yes
String fault Detection	Yes	Yes
AC/DC surge protection	DC Type II;AC Type III	DC Type II;AC Type III
Insulation detection	Yes	Yes
AC short circuit protection	Yes	Yes
General Specifications		
Dimensions W x H x D (mm)	540*590*240	
Weight(kg)	32	
Operating temperature range	0°C~+55°C(Charging)/-20°C~+55°C(DisCharging)	
Noise (dB)	<25	
Cooling type	Natural Convection	
Max. operation altitude	≤2000m	
Max. operation humidity	0~95% (No condensation)	
IP class	IP65	
Topology	Battery Isolation	
Communication	RS485/CAN2.0/WIFI/4G	
Display	LCD/APP	
Certification & Standard	AS/NZS 4777.2; CEI 0-16; IEC/EN 62109-1&2, IEC62040-1; IEC62116;IEC61727; EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4,EN61000-4-16, EN61000-4-18, EN61000-4-29	