TECLOMAN

Firefly OS Residential Energy Storage System (Integrated)

Integrated design

Highly integrated optical storage integrated inverter, high voltage battery system, BMS, EMS. There is no external cable connection between the structure, which effectively protects the safety of users and simplifies the on-site installation.

Ultra-thin design

Perfect combination with the wall and higher space utilization. The shape is more beautiful and fits the style of residential appliances.

Safety and Reliability

Built-in active perfluorohexanone fire extinguifier to ensure the ultimate safety of home applications.

Intelligent Energy Management

Built-in leading management system, integrated coordination and linkage management of battery, grid, photovoltaic and load. The data is more abundant and intuitive, and the household electricity is fully controlled.

Flexible capacity expansion

The backup time can be increased by separate battery system, or the power and electricity can be increased simultaneously by system parallel. Support up to 6 parallel expansion, up to 48kW/90kWh, plug and play design and automatic allocation of parallel machine ID.

Comprehensive functions

Covering the product models that can be used in Europe, Australia, Africa, North America and so on. Compatible with single-phase, three-phase and split-phase grid system. At the same time, the high-voltage battery system can be used separately, match the mainstream inverter brands in the market, so as to flexibly respond to the market and terminal methods.

Tecloman Energy Storage **Add:** Muehldorfstrasse8,81671Munich,Germany/ Web：tecloman.com

System type	Firefly OS-E5k-10	Firefly OS-E8k-15	Firefly OS-US7.6k-15
Technical parameters of inverter			
Model	Hybrid-OS-E5k	Hybrid-OS-E8k	Hybrid-OS-US7.6k
Photovoltaic (pv) input			
Maximum input power	8000W	12000W	11400W
Maximum access voltage	600Vdc	1000Vdc	600Vdc
MPPT voltage range/rated voltage	80~550Vdc/360Vdc	200~950Vdc/620Vdc	80~550Vdc/360Vdc
MPPT number/number of MPPT access strings per channel	2/1	2/1	3/1
Maximum input current	12.5A/12.5A	15A/15A	15.5A/15.5A/15.5A
Maximum short-circuit current	18A/18A	20A/20A	26A/26A/26A
Ac input/output			
Rated output power	5000W	8000W	7600W
Maximum output current	21.7A	13.3A	31.7A
Maximum input current (grid)	21.7A	13.3A	31.7A
Rated Voltage	220/230Vac	380/400Vac	240Vac
Operating voltage range	184~264Vac	323~440Vac	211.2-264Vac
Rated Frequency	50Hz/60Hz		60Hz
Operating frequency range	45~55Hz/55~65Hz		55~65Hz
Power factor	Default 1(-0.8~+0.8 adjustable)		
Total harmonics of current	< 3%@ rated power		
EPS output			
Rated output power	5000VA	8000VA	7600VA
Peak output power	8000VA, 10s	13000VA, 10s	12200VA, 10s
Rated Voltage	220/230Vac, 1W/N/PE	380/400Vac, 3W/N/PE	240Vac (L1-L2) , 120Vac (L1/L2-N) , Split Phase
Rated Frequency	50Hz/60Hz	50Hz/60Hz	60Hz
Total harmonic of voltage	< 3%@ Linear load		
Duration for switching between grid-connected and off-grid	＜10ms		
Efficiency			
Maximum efficiency	97.7%	98.2%	97.6%
European Efficiency /CEC Efficiency (for North America)	97.1%	97.4%	97%
Routine			
External communication	RS485/CAN		
Weight (approx.)	20kg	25kg	25kg
Dimensions (Width * Depth * Height)	742*176*435mm	742*176*550mm	694*172*600mm
Operating temperature *	-30~+60°C		
Operation Humidity	0~100%RH		
IP Class	IP65		
Noise level	＜30dB		
Heat dissipation mode	Natural cooling		
Certification			
Safety regulation	IEC62109-1&-2, IEC61000		UL1741, UL1741SA, IEEE 1547, IEEE1547.1, IEEE 1547A, UL1699B, UL 1998, Rule 21, HECO Rule 14H*, NEC 690.12-2020, CAN/CSA C22.2107.1-1, FCC Part 15 Class B
parallel in	EN50549-1, VDE AR-N-4105, VDE V0124-100, CEI 0-21		

System type	BH-OS-10	BH-OS-15
Battery Type	Lithium iron phosphate	
Rated capacity	10kWh	15 kWh
Usable Capacity*1	9.5kWh	14.25kWh
Depth of Discharge	Up to 95%, adjustable	
Rated Voltage	204.8Vdc	307.2Vdc
Operating voltage range	179.2Vdc~230.4Vdc	268.8Vdc~345.6Vdc
Dimensions (Width * Depth * Height; ±5mm)	742*176*1200mm	742*176*1200mm
Weight (Approx.)	120kg	180kg
Max. Continuous Charging/Discharging Power	10kW	15kW
Max. Continuous Charging/Discharging Current	50A	
Operating Temperature Range*2	-20°C to 50°C (discharge); 0°C to 50°C (charge)	
Relative humidity	5% ~95%	
Protection Grade	Ip65	
Installation method	Floor-mounted or wall-mounted	
Communications	CAN、RS485、WIFI、Ethernet	
Battery cycle times	> 6000 times @0.5C/25°C/90%DOD	
Certification Standards	IEC62619、CE、UN38.3、UL1973、UL9540A、FCC	
Parallel capacity expansion	2~3 machines in parallel; Up to 45kWh	2~3 machines in parallel; Up to 45kWh

Note:

Test conditions: 25°C±2°C, 0.5C, etc.

The battery performance decreases when the battery temperature is too high and too low.