

PV and Battery All-In-One

ESS1-(4.6-6)K-LV-F-AIOIt is a high-quality inverter and an intelligent device that integrates photovoltaic power generation and energy storage systems. It integrates core components such as photovoltaic modules, energy storage batteries, inverters, and control systems into a compact body, providing users with stable and clean power supply through efficient energy conversion and storage technology. This product can not only be used for household distributed photovoltaic power generation systems, but also widely applied in industrial, commercial, public facilities and other fields. It is an innovative work in our company's new energy field.



Product Core Highlights



The maximum charging/discharging current can reach 120A



Flexibly arrange the charging and discharging time of the inverter



Support grid connected operation



Multiple working modes can be configured



Support off grid applications of diesel generators



Can quickly stack batteries for expansion



UPS level switching time (less than 10ms), always supporting critical loads

Product Model	ESS1-4.6K1P-02-LV-F-AIO	ESS1-5K1P-02-LV-F-AIO	ESS1-6K1P-02-LV-F-AIO
PV String Input Data			
Recommended Max. PV Power	8kW		
Max. Input Voltage	580V		
Rated Input Voltage	350V		
Start-up Voltage	120V		
MPPT Voltage Range	120-520V		
Max. Input Current	15A/15A		
Max. Short Circuit Current	22.5A/22.5A		
MPPT Number / String Number per MPPT	2/2		
Battery Input Data			
Battery Voltage Range	42-58V		
Max. Charging/Discharging Power	5kW	6kW	
Max. Charging/Discharging Current	100A	120A	
Communications	RS485/CAN		
AC Output Data			
Rated Output Power	4.6kW	5kW	6kW
Rated Output Power	4.6kW	5.5kW	6.6kW
Max. Apparent Output Power	4.6kVA	5.5kVA	6.6kVA
Rated Output Current	20.9A	22.7A	27.3A
Max. Output Current	23.2A	25.2A	30A
Switching Time	< 10ms		
Rated Output Voltage/Frequency	L/N/PE 220V/230V 50Hz/60Hz		
Power Factor	0.8leading...0.8 lagging		
THDv	< 3%		
THDi	< 2%		
AC Input Data			
Max. Input Power	10kW		
Max. Apparent Input Power	10kVA		
Max. Input Current	50A		
Rated Input Voltage /Frequency	L/N/PE 220V/230V 50Hz/60Hz		
General Data			
Dimension D*W*H	610*436*257mm		
Cooling Concept	Forced-air		
Ingress Protection	IP65		
Operating Ambient Temperature	-25°C~+60°C (> 45derating)		
Max. Operation Altitude	3000m		
Communications	RS485/WIFI/GPRS		
Battery Data			
Battery Type	lithium iron phosphate		
Battery Module Capacity	5.12kWh		
Rated voltage	51.2V		
Working voltage range	40-58.4V		
Max. Number of Parallel Modules	4		
Module Cycle Life	≥6000		
Max. Charging/Discharging Current	95A/95A		
Weight	610*436*212mm		
Dimension D*W*H	49kg		
Cooling Concept	Naturel		
Ingress Protection	IP65		
Operating Ambient Temperature	-25°C~+55°C		
Max. Operation Altitude	3000m		