



Max. 12 years warranty

# SunESS Power All-in-One

Hybrid Inverter

- All-in-One**
- Modular, Compact and Simple
  - Easy Installation(30 Minutes Max)
  - Flexible Battery Expansion (5kWh-40kWh)

- Safe and reliable**
- Short circuit protection
  - Optional Arc-fault prevention (AFCI)
  - Optional rapid shut-down (RSD)

**Withstand 150% inrush current over 10 seconds**

**Support 150% oversized PV power**

**Support 100% 3 phase Unbalanced load**

**Ultra-fast switching (10ms) from On-grid to Off-grid state**

**Max. 12 years' warranty**

**Support heat Pump (optional)**

System Parameters	5-15kW							
	1	2	3	4	5	6	7	8
Normal Output Power	5-15kW							
Number of battery module	1	2	3	4	5	6	7	8
Battery nominal energy	5kWh	10kWh	15kWh	20kWh	25kWh	30kWh	35kWh	40kWh
Dimensions (W/H/D) mm	650/833/250	650/1148/250	650/1463/250	650/1778/250	650/1463/250 653/868/189	650/1463/250 653/1183/189	650/1778/250 653/1183/189	650/1778/250 653/1498/189
Total weight	96kg	148kg	200kg	252kg	200kg+117kg	200kg+169kg	252kg+169kg	252kg+221kg
Ambient Temperature	-4°F to 122°F(-20°C to 50°C)							
Relative humidity	5% to 95%, non-condensation							
Altitude	<4000m(>3000m derating)							
Cooling method	Air cooling							
Noise emission	<47dB							
Ingress protection	IP65							
Installation method	Stacked/Leaning against the wall							
Safety standards	EN 62109-1/EN 62109-2/EN 62477-1/EN 61000-6-1/EN61000-6-3							
Grid standards	EN 50549-1/VDE4105/VDE 0124/NC-RIG:2016/EIFS:2018/ToR Type A/ NA/EEA-NE7-CH2020							
Battery standards	IEC62619/CE/UN38.3/VDE 2510-50/FCC/UL1973							

## SunESS Power All-in-One

<b>Battery Module</b>						
Battery Type	LiFePO4					
Nominal energy	5kWh					
Usable energy	4.5kWh					
Rated voltage	400V					
Voltage range	350-450V					
Rated charge/discharge power	2.5kW					
Peak output power	4.2kW/20s					
Weight	52kg					
Dimensions (W/H/D)	653/315/189mm					
<b>Inverter Module</b>						
	SW5KH3UT	SW6KH3UT	SW8KH3UT	SW10KH3UT	SW12KH3UT	SW15KH3UT
<b>PV Input Parameters</b>						
Max. input power	8000W	9000W	12000W	15000W	22500W	22500W
Max. input voltage	1000V					
MPPT voltage range	180-850V					
Start-up voltage	180V					
Max. input current per MPPT	A: 15A	A: 15A	A: 15A / B: 30A	A: 15A / B: 30A	A: 15A / B: 30A	A: 15A / B: 30A
Max. short-circuit current per MPPT	A: 19A	A: 19A	A: 19A / B: 38A	A: 19A / B: 38A	A: 19A / B: 38A	A: 19A / B: 38A
Number of MPPTs	1	1	2	2	2	2
Number of input strings per MPPT	A: 1	A: 1	A: 1/ B: 2	A: 1/ B: 2	A: 1/ B: 2	A: 1/ B: 2
<b>Battery Input Parameters</b>						
Support battery capacity	5-40kWh					
Rated battery voltage	400V					
Battery voltage range	350-450V					
Max. continuous charging current	23A			46A		
Max. continuous discharge current	23A			46A		
Max. discharge power	5000W	6000W	8000W	10000W	12000W	15000W
Max. charging power	5000W	6000W	8000W	10000W	12000W	15000W
<b>Output parameters(On-grid)</b>						
Rated output power	5000W	6000W	8000W	10000W	12000W	15000W
Max. output apparent power	5500VA	6600VA	8800VA	11000VA	13200VA	16500VA
Max. input apparent power	8000VA	9000VA	12000VA	15000VA	18000VA	22500VA
Rated output voltage	220/380V 230/400V 3W/N/PE					
Rated output frequency	50Hz					
Max. output current	8.4A	10A	13.4A	16.7A	20A	25A
Max. input current	12.2A	13.7A	18.2A	22.8A	27.4A	34.2A
Power factor	0.8 leading to 0.8 lagging					
THDi	<3%					
<b>Output parameters(Off-grid)</b>						
Off-grid rated apparent power	5000VA	6000VA	8000VA	10000VA	12000VA	15000VA
Max. output apparent power	5500VA	6600VA	8800VA	11000VA	13200VA	16500VA
Max. output current	7.6A	10A	13.4A	16.7A	20A	25A
Rated output voltage	220/380V 230/400V 3W/N/PE					
Rated output frequency	50Hz					
THDv (@ Linear Load)	<3%					
<b>Efficiency</b>						
Max. efficiency	97.4%	97.4%	97.8%	97.8%	97.8%	97.8%
Euro. Efficiency	96.5%	96.5%	96.8%	96.8%	97%	97%
<b>Protection</b>						
Input DC switch					Integrated	
Insulation Resistance Detection					Integrated	
Residual current monitoring					Integrated	
Input reverse polarity protection					Yes	
Anti-Islanding Protection					Yes	
Over current protection					Yes	
AC short circuit protection					Yes	
AC Over voltage protection					Yes	
AFCI(Arc Fault Circuit Interrupter) Protection					Optional	
Dry contact remote scheduling					Yes	
DC Surge Protection	Type II	Type II	Type II	Type II	Type II	Type II
AC surge protection	Type II	Type II	Type II	Type II	Type II	Type II
<b>Basic parameters</b>						
Display	LED&APP					
BMS communication method	CAN					
Meter communication method	RS485					
Monitoring method	WiFi/bluetooth					
Topology	Transformerless					
Operating temperature range	-30-60 °C (>45°Cderating)					
Weight	41kg					
Dimensions (W/H/D)	650/480/250mm					