



HESP14-18kW

Three-Phase Hybrid Solar Storage Inverter

High-Performance PV Input

- 3 independent MPPT ports, up to 1.6× rated PV power
- PV open-circuit voltage up to 600 V
- Single-channel current up to 40 A

Scalable Commercial System

- Supports up to 9 units in parallel
- Up to 162 kW for C&I energy storage system

Intelligent Control

- Time-of-use (peak-valley) scheduling supported

Fast & Powerful Energy Management

- Supports fast charging
- Maximum charge/discharge current up to 350 A
- Dual activation function (grid or PV)

Grid & Load Flexibility

- Separate generator port
- Smart load function
- AC coupling supported
- Maximum grid bypass current: 200 A

Industrial-Grade Power Architecture

- Three-phase input/output (without neutral wire)

Application scenario



House



Farm



Telecom



Countryside



Island



Pasture

Three-Phase Hybrid Solar Storage Inverter

MODEL	HESP48140UH3	HESP48160UH3	HESP48180UH3
AC Input/Output Data			
Rated AC Input/Output Active Power	14000W	16000W	18000W
Max. AC Input/Output Apparent Power	15400VA	17600VA	19800VA
Rated AC Input/Output Current	44.5A/38.8A	50A/44.5A	55.5A/50A
Max. AC Input/Output Current	44.5A/38.8A	50A/44.5A	55.5A/50A
Peak Power (off-grid)	28000VA	32000VA	36000VA
Power Factor Adjustment Range	0.8 leading to 0.8 lagging		
Rated Input/Output Voltage/Range	120/208V 0.85Un-1.1Un		
Rated Input/Output Grid Frequency/Range	60Hz/40Hz-70Hz		
Grid Connection Form	3L+N+PE		
THD	<3% (of nominal power)		
Battery Input Data			
Battery Type	Lead-Acid Batteries / Lithium Batteries / User-defined		
Number of Battery Input	2		
Battery Voltage Range	40V-60V		
Max. Grid/Generator Charging Current	300A	330A	350A
Max. Hybrid Charging Current	300A	330A	350A
Max. Discharging Current	300A	330A	350A
Charging Strategy for Li-ionBattery	Self-adaption to BMS		
PV Input Data			
No. Of MPPT Trackers	3		
No. of Strings MPPT Tracker	2+2+2		
Max. PV Access Power	28000W	32000W	36000W
Max. PV Input Power	22400W	25600W	28800W
Max. PV Input Voltage	600V/600V/600V		
Start-up Voltage	120V		
Max. PV Input Current	40A+40A+40A		
Max. Input Short-Circuit Current	50A+50A+50A		
MPPT Voltage Range	120V-500V		
Grid/Generator Input			
Input Voltage Range	Phase voltage: 90V-140V, line voltage: 156V-243V		
Input Frequency Range	40Hz-70Hz		
Max. Bypass Overload Current (Grid)	200A		
Efficiency			
MPPT Tracking Efficiency	99.9%		
Max. Efficiency	97.5%		
CEC Efficiency	97%		
General Data			
Parallel Capacity	1~9 Units		
Dimension	860x480x313mm	Humidity	0~100%
Weight	59kG	Cooling Method	Heat sink + intelligent air cooling
Protection Degree	IP65	Noise	<55dB
Temperature	-25~60°C, >45°C Derating	Communication	RS485/CAN/USB/Dry Contact
Warranty	5 years	External Module (Optional)	Wi-Fi/4G Stick
Certificate	UL 1741-2021 (UL1741SB), CSA C22.2 No 107.1-16, IEEE 1547-2018 & 1547a-2020 & 1547.1-2020 (SRD V2.0), UL 1741 CRD-PCS, UL1699B, CEC, SGIP, CSIP		
Protection			
PV Lightning Protection	Yes	Anti-islanding Protection	Yes
Leakage Current Detection	Yes	Insulation Resistor Detection	Yes
Output Overcurrent / Shorted Protection	Yes	PV Input Reverse Polarity Protection	Yes
Overvoltage Category	AC type II/DC type III	Surge protection	AC type II/DC type II