

PV MPPT Controller

HEXMPPT-6 / HEXMPPT-12



Smart Power Tracking Technology

Real-Time Dynamic Optimization: Continuously monitors the solar panel's voltage and current, automatically locking onto the Maximum Power Point (MPP) for peak performance.

Adaptive Algorithm: Intelligently adjusts the operating point in response to varying light intensity and temperature, increasing energy harvest by 15-30%.



High-Efficiency DC Coupled System

Direct Charging Architecture: Solar panels charge the battery directly, minimizing AC-DC conversion losses (efficiency loss <3%).

Flexible Array Configuration: Supports hybrid connection of panels with different orientations and tilt angles, ideal for complex installation environments.



Precise Charging Management

Charging Precision: Utilizes voltage threshold control and a dynamic MPP tracking algorithm for accuracy.

Battery Protection: Safeguards against overcharge and over-discharge, with an optimized three-stage charging curve (Bulk, Absorption, Float).

Temperature Compensation: Features baseline compensation with adaptive adjustment across the entire operating temperature range.



Scenario Adaptability & Reliability

Robust Performance in Complex Environments: Rapidly tracks MPP fluctuations on cloudy days and operates reliably across a wide temperature range of -25°C to 60°C.

Scalable System Design: A modular architecture allows for the parallel connection of multiple controllers for expanded capacity.

Model		HEXMPPT-6
Input		
Maximum photo voltaic array voltage	No more than 900V and no more than the maximum withstand voltage of the rear cell	
MPPT voltage range	200V-900V	
Full-load MPPT voltage range	560V-900V	
Maximum branch current	20A	
Enter the number of PV branches	6	
MPPT quantity	2	
Each MPPT current	55A	
Output		
Voltage range	600-950V	
Rated voltage	Default 71 6.8v, adjustable	
Rated output current	84A	
Rated output power	60kw	
Maximum output current	120A	
System		
European efficiency	99.4%	
IP grade	IP65	
Cooling method	Air-cooling	
Dimensions	610(W)*480(D)*257(H)mm	
Weight	25kg	
Operating temperature	-30~55℃	
Power supply mode	Self-powered (no power consumption at night)	
Communication interface	RS485	

Model		HEXMPPT-12
Input		
Maximum photo voltaic array voltage	No more than 900V and no higher than the maximum tolerance voltage of the rear battery	
MPPT voltage range	200V-900V	
Rated MPPT voltage range	560V-900V	
Maximum branch current	20A	
PV input strings number	12	
Number of MPPT	4	
Current per MPPT	55A	
Output		
Voltage range	600-950V	
Rated voltage	Default 71 6.8v, adjustable	
Rated output current	168A	
Rated output power	120kW	
Maximum output current	240A	
System		
European efficiency	99.4%	
IP grade	IP65	
Cooling method	Air-cooling	
Dimensions	610(W)*480(D)*257(H)mm	
Weight	30kg	
Operating temperature	-30~55℃	
Power supply mode	Self-powered (no power consumption at night)	
Communication interface	RS485	