

# 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
<b>Input</b>	
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
<b>Output</b>	
Voltage range	600-950V
Rated voltage	Default 71.68V, adjustable
Rated output current	84A
Rated output power	60kW
Maximum output current	120A
<b>System</b>	
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°C
Power supply mode	Self-powered (no power consumption at night)
Communication interface	RS485
Model	HEXMPPT-12
<b>Input</b>	
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
<b>Output</b>	
Voltage range	600-950V
Rated voltage	Default 71.68V, adjustable
Rated output current	168A
Rated output power	120kW
Maximum output current	240A
<b>System</b>	
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°C
Power supply mode	Self-powered (no power consumption at night)
Communication interface	RS485