

WattMate Series

Hot water is civilization

An eco-smart heating regulator —

designed to maximize the self-consumption of solar to heat water.



Single Phase | 0-3.6 kW auto-follow Three Phase | 0-9 kW auto-follow

With a simple, standalone solution, the WattMate enhances self-consumption and minimizes costs. It efficiently harnesses photovoltaic energy to heat water, automatically routing self-generated surplus solar power to an electric water heater with a storage tank. This provides immediate cost savings and, in some cases, can eliminate grid reliance for up to a year. Moreover, WattMate is universally compatible, seamlessly integrating with existing inverters and monitoring systems.

Maximize Energy Self-consumption

- Adapt to changing energy consumption patterns: EMS/ Smart Meter/ Inverter/ Solar Modes
- Automatically adjusts heating to prevent energy waste based on real-time data
- · Surplus solar auto-capture & delivery with no grid usage
- Support off-grid with direct PV input

Intelligent O&M

- 24h Real-time insight into heating data per second
- Regular remote firmware updates
- Automatic faults and warning alert
- Self-learning algorithm for precise preheating time

Customizable Setting and Management

- Easy-to-adjust heating period, temperature, and power via WattDesk Cloud
- One-click to switch running modes
- Open interface for external integration

Reliable and Safe

- 24/7 service ticket for priority customer support
- Remote control device status with shortcut key



Flexibility at Its Ultimate with Multi-systems

Strong compatibility with multi-system integration



Fully integrated with EMS in the home for intelligent heating source control.

With standard Modbus RTU/TCP-IP protocols, WattMate can integrates seamlessly with external control devices, enhancing EMS management and enabling efficient coordination of energy storage subsystems. You can further optimize consumption by setting ideal temperatures and power for hot water.



Set up COM. with inverter to start the heating under zero-injection.

WattMate can always follow real-time PV generation and deliver surplus solar to water heating automatically. *Please disable "0-injection mode" on the inverter to allow surplus solar could be captured by WattMate.



Auto detect and start water heating according to excess solar.

By measuring the available surplus solar power through the WattMate smart meter installed on the grid, WattMate minimizes the power demand of the electric element in the water heater or hot water storage tank, thereby avoiding the need to draw electricity from the grid. It's a plug-and-play solution.



Running off-grid with direct PV input

When there is still roof space for additional PV panels to connect WattMate, it can support a direct DC (PV) input within 120-300V at a Maximum of 14.5A to heat water under an off-grid operation.

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Master Any Energy Scenario with Ease

Born to heat water

Maximize solar In general

WattMate automatically captures surplus solar generation (0-9 kW) and delivers it directly to your heating system, ensuring no energy is lost to the grid and avoiding using any grid power. This maximizes your energy independence while reducing reliance on external sources.

Running without solar

Even during winter or at night when solar production is low, WattMate can keep your water heated at the assigned time and temperature with assigned grid power, all controlled remotely via the WattDesk App for complete convenience and control.

Off-grid applications with direct PV input

WattMate captures surplus solar power from your roof to heat water in solar mode. With an input range of 120V to 300V at a maximum current of 14.5A, it delivers a self-sustaining energy solution, even in the absence of a grid connection.





Remote O&M Makes You in a Breeze

Empowering end users with personalized solutions



Cloud-based system monitoring from any time & anywhere

WattMate delivers real-time heating status via the WattDesk Cloud, accessible on any device. It offers remote customizable settings and tracks all commands through system logs. Plus, its flexible communication channel ensures fast issue resolution.

User-Defined Thresholds

WattMate offers complete control over your water heating system. Users can set personalized heating schedules, temperature limits, and power usage thresholds to optimize energy efficiency and prevent overconsumption. This flexibility ensures comfort while maximizing energy savings, whether adjusting heating times, setting temperature preferences, or controlling power limits based on available resources.

Stunning self-learning algorithm ensures precise preheating times

The self-learning algorithm continuously optimizes heating control based on historical data and user habits, ensuring precise preheating timing. For example, if you set a maximum grid power of 3 kW and a heating temperature of 65°C for 18:00 to 19:00, WattMate will calculate the optimal start time with minimal holding time, ensuring hot water is ready exactly when needed—enhancing the user experience while reducing energy waste.

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Driving efficiency for business users

Lightning-fast data insights: Every second

The real-time data insight offers users instant access to key system performance metrics, updated every second. By continuously monitoring heating power, temperature, and operational efficiency, it empowers users to make informed decisions and optimize energy usage in the most suitable running mode. At the same time, the complete lifecycle data of the device is automatically stored, with historical data accessible at any time.







Remote Firmware Updates with Auto-Prompt

WattMate provides auto-prompt notifications for available firmware updates. With a simple click, users can easily ensure their system up to date with the latest improvements without visiting the installation sites. To access performance enhancements, security updates, and new features, ensure optimal system performance and stability with minimal effort.

Automatic Fault & Warning Alerts

With automatic alerts, WattDesk empowers proactive management by addressing issues before they escalate. The one-click self-test ensures everything works optimally after system installation or updates. Together, these features ensure WattMate operates efficiently from the start, minimizing on-site maintenance, downtime, and costs.





WattMate Smart heating partner

	WM-3.6KW-1P	WM-9.0KW-3P	
AC Input			
Voltage	AC:230V	AC:1~230V/3~400V	
Frequency	50Hz	50Hz	
Max.input Current	16A	3*14A	
AC Detection	Yes	Yes	
DC Input			
Input Voltage Range	120-300V	120-300V	
Maximum Power Input	3.6kW	3.6kW	
Current	14.5A	14.5A	
Protection	Over input voltage/current protection	Over input voltage/current protection	
Heating Output			
Max. heating power	3.6kW	9kW (L1:0~3kW adjustable, L2/L3:3kW fixed)	
Frequency	50Hz	50Hz	
AC max. output current	16A under AC input	3*14A under AC input	
	14.5A under DC input	14.5A under DC input	
THDi	<3%	<3%	
General			
Type of power regulation	Pulse width modulation(PWM)		
Self-consumption	<10w standby	<10w standby	
Communication	ModBus RTU, ModBus TCP/IP, WiFi/	ModBus RTU, ModBus TCP/IP, WiFi/LAN, Web Portal, APP	
Dimensions (height x width x depth)/W	eight 258*338*90(mm)/ 4.6kg		
Protection class	IP44	IP44	
Installation	Wall Mounted	Wall Mounted	
Ambient temperature range	0~+40°C	0~+40°C	
Permitted humidity	0~99%, non-condensing	0~99%, non-condensing	
Certificates and compliance with standa	ards CE, EN 61000-6-2, EN 61000-6-3, E	CE, EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 300 328	

* If DC input exceed the maximum voltage of 300V, WattMate will close the heating element to protect the system circuit.

• Only resistance load is approval.

• AC input and DC input cannot work at the same time, solar self-consumption is always high priority, while grid power working as backup upon demand.

• 1*PT-1000 temperature sensor is included as standard accessory, plug and play.

• WattMate reserves the right to modify the technical datasheet and apperance of the product in the catalogue without prior advice to the users.

• WattMate is a Wattsonic company.

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