

# WATTS ⚡ BATTERY

Power up everything from a laptop to a house



A smart, portable energy storage device, which combines all the functionalities of a large, stationary energy storage systems in one modular case.

## Technical Specs:

Weight: 14 kg

Dimensions: 140mm x 460mm x 360mm

Outlets: 230V/50Hz

Power: 1.5kW/2.2kW peak

Capacity: 1.2 kWh

Charging: Solar panels, power generator or grid

Outputs: AC 230V/50Hz, DC 5V

Inputs: AC 230V/50Hz, DC 30-95V

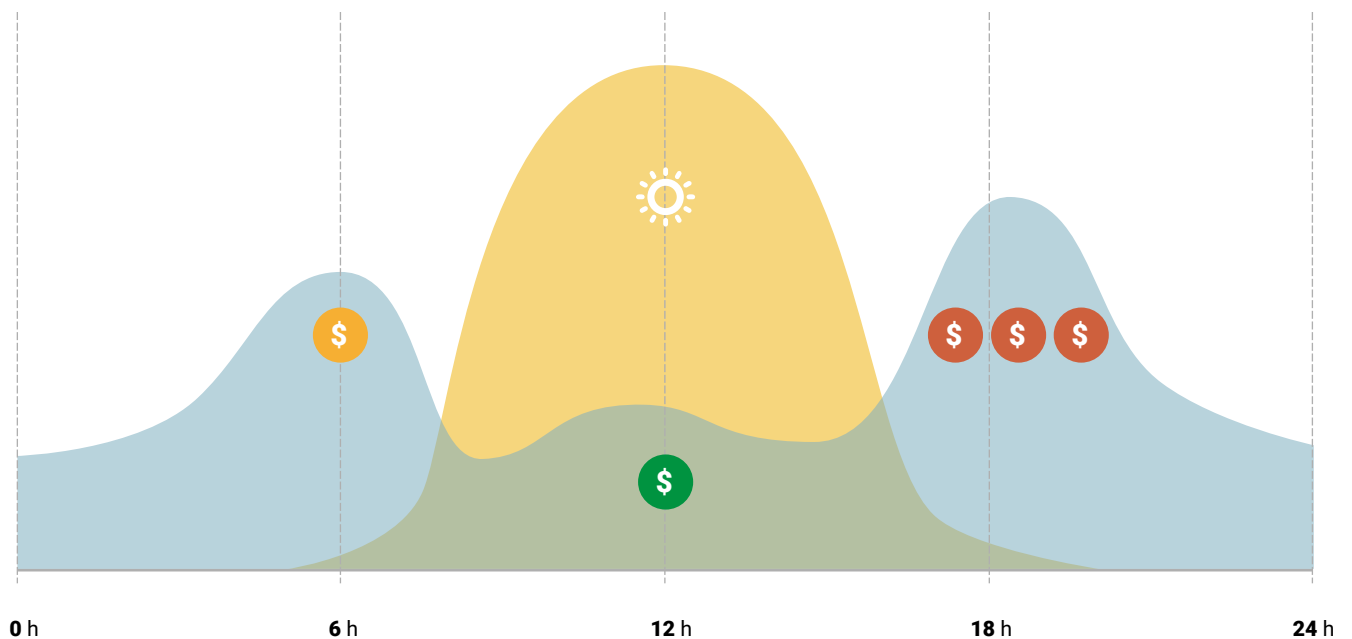
Operating temperature: -10°C to 40°C



Warranty: 7 yrs for Internet connected devices, 2 yrs general

Up to 12kWh of energy and 15 kW of power when you stack 10\*

\*depending on local regulations

## Time-of-use bill management / demand charge reduction Increased PV self-consumption



-  Daily consumption peaks
-  Solar power availability

WATTS gives customer ability to shift electricity demand from peak to off-peak periods without the need for behavioural changes, by pre-charging during off-peak hours and discharging to meet customer load during peak periods. This control allows customers to minimize peak rate purchase, and should save them significant money in the long term.

WATTS is a simple and reliable tool to build distributed solar system with maximum rate of self-consumption.



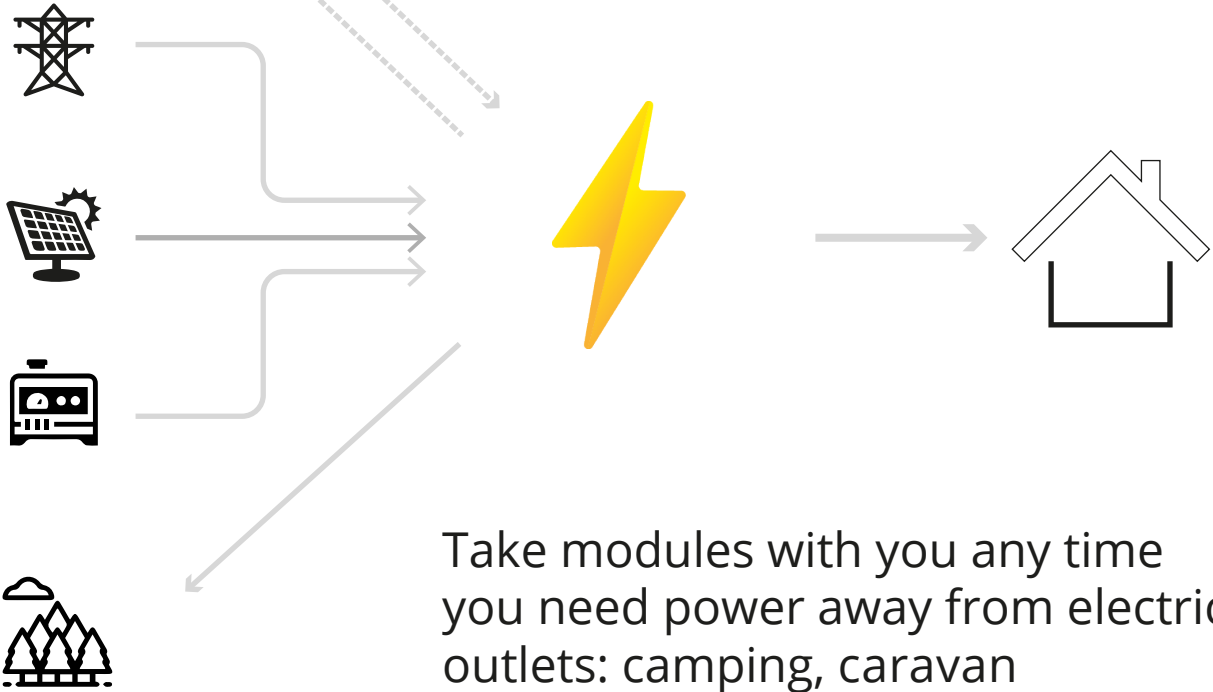
## Adjust the capacity and power by number of modules

Each module already includes all necessary elements of the power supply system and does not require additional spending. The modular system is maintenance-free, extremely easy to use and works on the principle of plug-and-play.



## Use and manage any sources of power

The Mobile application allows the user to fully control the power supply system.



Take modules with you any time you need power away from electric outlets: camping, caravan wherever you are!

## One module technical specifications

Input side	
AC Grid connection type	Single-phase, TN-C-S, TN-C
Maximum AC power in bypass mode - $P_{ac\ max}$	7500W
Max AC power in bypass mode in stack of 10 units	7500W
Rated AC grid voltage - V	230V
Absolute maximum DC voltage - $V_{dc\ max}$	100V
Start-up DC voltage - $V_{start}$	33 V
Operating DC voltage range - $V_{dc\ MPP}$	30-95V
Number of independent MPPT	1
Maximum DC power MPPT - $P_{MPPT\ max}$	1000 W
DC voltage range parallel configuration of MPPT	48V
Maximum DC current - $I_{dc\ max}$	30 A
Number of DC inputs pairs for MPPT	1
DC connection type	Term block 2POS push-in type with maximum wire size for connection 16mm <sup>2</sup>
Input protection	
Reverse polarity protection	Yes, from limited current source
Over voltage protection for each MPPT - varistor	Yes
Photovoltaic array isolation control	According to local standard
Protections	Short circuit / Overload / Over voltage / Over temperature
Battery charger	
Maximum charging power	350 W
Maximum discharging power	1500 W

Output side	
AC Grid connection type	Single-phase, TN-C-S, TN-S
Maximum AC power - $P_{ac,max}$	2200W
Nominal AC power - $P_{ac,nom}$	1500W
Max AC power in bypass mode	7500W
Max AC power in stack of 10 units	15000W
AC voltage range	198...242 V
Maximum AC current from the socket- $I_{ac,max}$	16A
Contributory fault current	20A
Total current harmonic distortion	< 3%
AC connection type	Term block 3POS push-in max wire size 16mm <sup>2</sup> , Two 45x45 230V EU socket
Rated DC voltage	5V
Maximum DC power	25W
DC connection type	4 USB 2.0 ports (2 x 2A, 2 x 1A) with combined max output power at 25W
Output protections	
Anti-islanding protection	According to local standard
Maximum external AC overcurrent protection	20A
Operating performance	
Maximum efficiency - $\eta_{max}$	98 %
Weighted efficiency (EURO/CEC)	95.4 %
Typical battery efficiency (full cycle)	94.0 %
Communication	
Remote monitoring/control Integrated datalogger	WiFi b/g/n /GSM, Bluetooth 4.0
Wireless local monitoring	WiFi with webserver
User interface	Mobile APP, Webserver UI
Environmental	
Ambient temperature range	-10°C to 40°C
Relative humidity	5...80 % condensing
Sound pressure level, typical	36 dBA @ 1 m
Maximum operating altitude without derating	2000 m
Physical	
Environmental protection rating	IP20
Cooling	Active
Dimension (H x W x D)	140mm x 460mm x 360mm
Weight	14 kg
Safety	
Isolation level	Transformerless
Marking (will be obtained)	CE
Conformity to Safety and EMC standard (will be obtained)	IEC 62040-1, IEC62477-1 EN 301 489-1, EN 301 489-17, IEC60529:2013.
Other features	
Grid support	Yes, where it is required
Battery	
Manufacturer	LG
Battery type	Li-Ion
Typical/Max power discharge	1.5kW / 2.2kW
Max power charge	1.5kW
Initial capacity (typ.)	1.36kWh
Nominal capacity (during the life time)	1.2kWh
Depth of Discharge (DOD)	100%
Optimal battery operational temperature range	-5°C to 35°C
Full battery function operational temperature range charge	0°C to 40°C
Full battery function operational temperature range discharge	-10°C to 40°C
Relative humidity	5...95 % without condensing

[!] The manufacturer has the right to change the technical characteristics of the final product at its own discretion