

BIG HOUSE, BIG POWER

Single Phase All-in-One ESS with HV Battery

- 3.6KW
- 5.0KW
- 6.0KW



Simpler

- Quick and easy single person installation
- Interconnects with standard household



Safer

- No high voltage for battery installation
- Superior LiFePO4 Safety Performance
- Whole system safety tested and certified by Dekra Germany



Great reliability

- Superior LiFePO4 technology with 10,000 cycles at 90% DOD
- 10 years standard warranty
- Modular design promotes redundancy





Plug in and Play

Wall mouted or stackable, easily installation



Standard Runnig Modes



Maximum Solar
Self-consumption



Emergency Power
Back-up (UPS Level)



Smart Micro Grid Solution
(Off-grid)



Parallel
Connection



Zero-injection



Peak Valley Mode



Peak Load Shifting, one key to
optimize grid connection capability



Three Phase Connection
with Asymmetric Output



Battery High Voltage
Max. 750V



Always on UPS
< 10ms



Zero Grid Injection Function



LiFePO4, Superior Safety



Modular Design



Master BMS

Operation Voltage [Vdc]	100~500
Max. Charge/Discharge Current [A]	50
Recommend Charge/Discharge Current [A]	35
Functions	Pre-charge, Over-Less Voltage/ /Over-Less Temperature Protection, Cells Balancing/SOC-SOH calculation etc.
Communication Protocol/Connector Type	CAN/RS485 ModBus, TCP/IP/ RJ45
Power Connection Type	Amphenol MC4
User Interface	LCD Display(Optional, need to confirm upon order)
Dimension [W*H*D mm]	557*319*152.6
Weight	10kg
Operating Temperature [°C]	-20~55
Ingress Protection	IP21 (Optional IP65, need to confirm upon order)
Installation Method	Stackable or Wall Mounted
Warranty	10 years

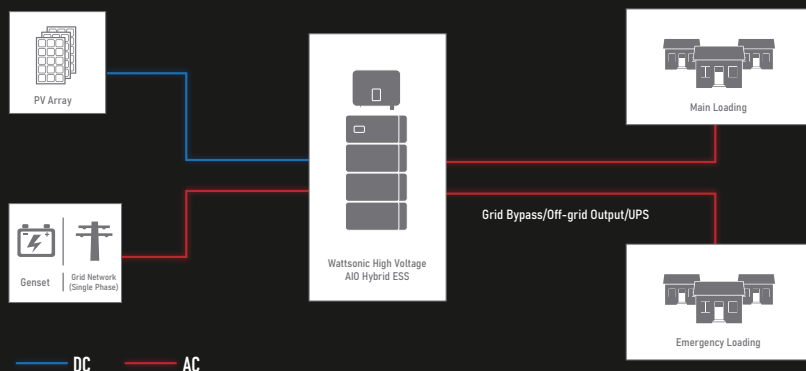


Battery Module

Nominal Voltage/Capacity per Module	76.8V/3.84KWH
Expand Capability	Up to 5 Modules series at 384V/19.2KWH
DOD Recommended	90%
Max. Charge/Discharge Current [A]	50A Continual
Recommend Charge/Discharge Current [A]	35A Continual
Communication Protocol/Connector Type	CAN/ RJ45
Power Connection Type	Amphenol MC4
Dimension [W*H*D mm]	680*319*152.6 per module
Weight	30kg
Charge Temperature Range [°C]	0~45
Discharge Temperature Range [°C]	-20~55
Ingress Protection	IP21 (Optional IP65, need to confirm before order)
Installation Method	Stackable or Wall Mounted
Cables Connection Method	Connection from side
Warranty	10 years or 10,000 cycles @90% DOD

*Battery System Configuration Options: 153V/7.68kWh, 230V/11.5kWh, 307V/15.3kWh, 384V/19.2kWh

*Wattsonic reserves the right to modify the technical datasheet and appearance of the product in the catalogue without prior advice to the users



Inverter

PV INPUT(DC)	WTS-3.6KW-HVS	WTS-5.0KW-HVS	WTS-6.0KW-HVS
Max. DC Input Power [W]	4800	6650	8000
Start-up PV Voltage [Vdc]	80	80	80
Max. Input DC Voltage [Vdc]	600	600	600
Nominal Input DC Voltage [Vdc]	360	360	360
MPPT Voltage Range [Vdc]	100~550	100~550	100~550
Number of MPP Trackers	2	2	2
PV String per MPPT	1	1	1
Max. PV Input Current [A]	12.5/12.5	12.5/12.5	12.5/12.5
Max. Short Current [A]	15	15	15

INPUT& OUTPUT DC (BATTERY)

Battery Voltage Range [Vdc]	80~480
Max. Charging/Discharging Current [A]	35
Inverter Built-in Over-current fuse Capacity [A]	63
Battery Ready Optional Function	YES

AC OUTPUT/INPUT @GRID

Nominal Apparent Power Output to Grid [VA]	3600	5000	6000
Max. Apparent Power Output to Grid [VA]	3600/3960	5000/5500	6000/6600
Max. Apparent Power from Grid [VA]	7200(Charging 3.6KW 3.6kw back-up by pass)	10000(Charging 5KW 5kw back-up by pass)	12000(Charging 6KW 6kw back-up by pass)
Nominal Output Voltage [V]/Frequency [HZ]	230V, 50/60	230V, 50/60	230V, 50/60
Max. AC Current Output to Grid [A]	16/18	21.7/24	26.1/28.7
Max. AC Current from Grid [A]	32	43.4	52.2
Output Power Factor	~1(Adjustable from 0.8 leading to 0.8 lagging)		
Output THDi (@Nominal Output)	<3%	<3%	<3%

AC OUTPUT @BACK UP WITH BATTERY

Max. Output Apparent Power [VA]	3600	5000	6000
Peak Output Apparent Power [VA]	4700 Continual 5400, 60sec	6500 Continual 7500, 60sec	8000 Continual 9000, 60sec
Max. Output Current [A]	15.7	21.7	26.1
Nominal Output Voltage [V]	230V	230V	230V
Automatic Switch Time [ms]	<10	<10	<10
Nominal Output Frequency [HZ]	50/60	50/60	50/60
Output THDv (@Linear Load)	<3%	<3%	<3%

Battery Options

Voltage (Vdc)	153V	230V	307V	384V
Capacity [kWh]	7.6kWh	11.5kWh	15.3kWh	19.2kWh
Discharging Power [kW]	5.3kW	8.0kW	10.7kW	13.4kW

EFFICIENCY

PV Max. Efficiency	98.1%
PV Europe Efficiency	97.5%
PV Max. MPPT Efficiency	99.9%
Battery Charge Efficiency[Inverter]	97.8%
Battery Discharge Efficiency[Inverter]	97.5%

PROTECTION

PV Input Reverse Polarity Protection	YES
Battery Input Reverse Polarity Protection	YES
Anti-Islanding Protection	YES
Insulation Resistance Detection	YES
Residual Current Monitoring Unit	YES
Output Over Current Protection	YES
Grid Output Short Protection	YES
Output Over Voltage Protection	YES

GENERAL DATA

Operating Temperature Range [C]	-30~60
Relative Humidity	0~100%
Operating Altitude [m]	4000
Cooling	Fan Free
Noise [dB]	<25
User Interface	LED&APP
Communication with BMS	CAN&RS485
Communication with Meter	RS485
Communication with Portal	Wi-Fi/Ethernet
Weight [kg]	24
Size (W*H*D) [mm]	550*410*175
Mounting	Wall Mounted
Protection Degree	IP65
Standby Self-Consumption [W]	<15
Topology	Transformerless