

# Li-HV Commercial

## Three Phase Hybrid AIO ESS

Inverter Options    25/30/40/50kW-100A-3P  
HV Battery Options    65/130/195/261/326kWh



Cable-free design inside the cabinet



Simple installation and O&M



Support system parallel to realize upgraded capacity



Up to 98.8% max efficiency



Intelligent operation, keep everything under control in a single click



With remote monitoring and upgrade, worry free from service

## Unburdened by complex procedures.



Simplified installation, all-in-one plug and play. The most recent cable-free design guarantees zero cables inside the cabinet. With packed connectors and cables, Wattsonic prepares all essential products and accessories you may require. No further preparation is needed.



Flexible logistics management supports random collection and delivery. Based on superior compatibility, a single rack could match the battery and BMS loading randomly without checking in advance.



Upgraded Capacity.

Both parallel and off-grid ports can be connected in our commercial energy storage systems, parallel operation capability from kilowatts to megawatts.

Up to 100%  
unbalanced load

Up to 110%  
AC output overloading

135-750V  
super wide battery voltage range

Up to 120% for 60 seconds  
overloading output at back-up side

100A  
charge/Discharge

More than capable,  
bring power to a new stage.



# Intelligent control methods to keep everything in sight.

Comprehensive back-end data — Inverter/battery system/options with features

Easy data check via both OLED display and App

Support remote monitoring and update

Operating efficiency, one button to switch

BMS open interface for direct connection with fire fighting equipment and control

Multi external communication methods: WiFi /LAN /GPRS /RS485



# Revolutionizing the way small businesses power their operations.

## Application



Small business building



Grid support



High strength Load



Small factory



Cafe



Data center

## Detailed monitoring control



Dual Cells Voltage  
Sensors Channel, 10mA  
accuracy, 10K sensing  
frequency/S

Full cells monitoring  
control

BMS full data records  
100K/frame

## Ultra safety

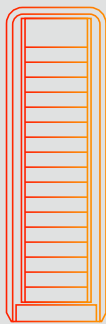


BMS SPD integrated for  
DC surge power  
protection



IP65 protection degree

## Multi-scenario customization



Outdoor-proof versions  
of products

Intensified waterproof  
design

## Long designing life

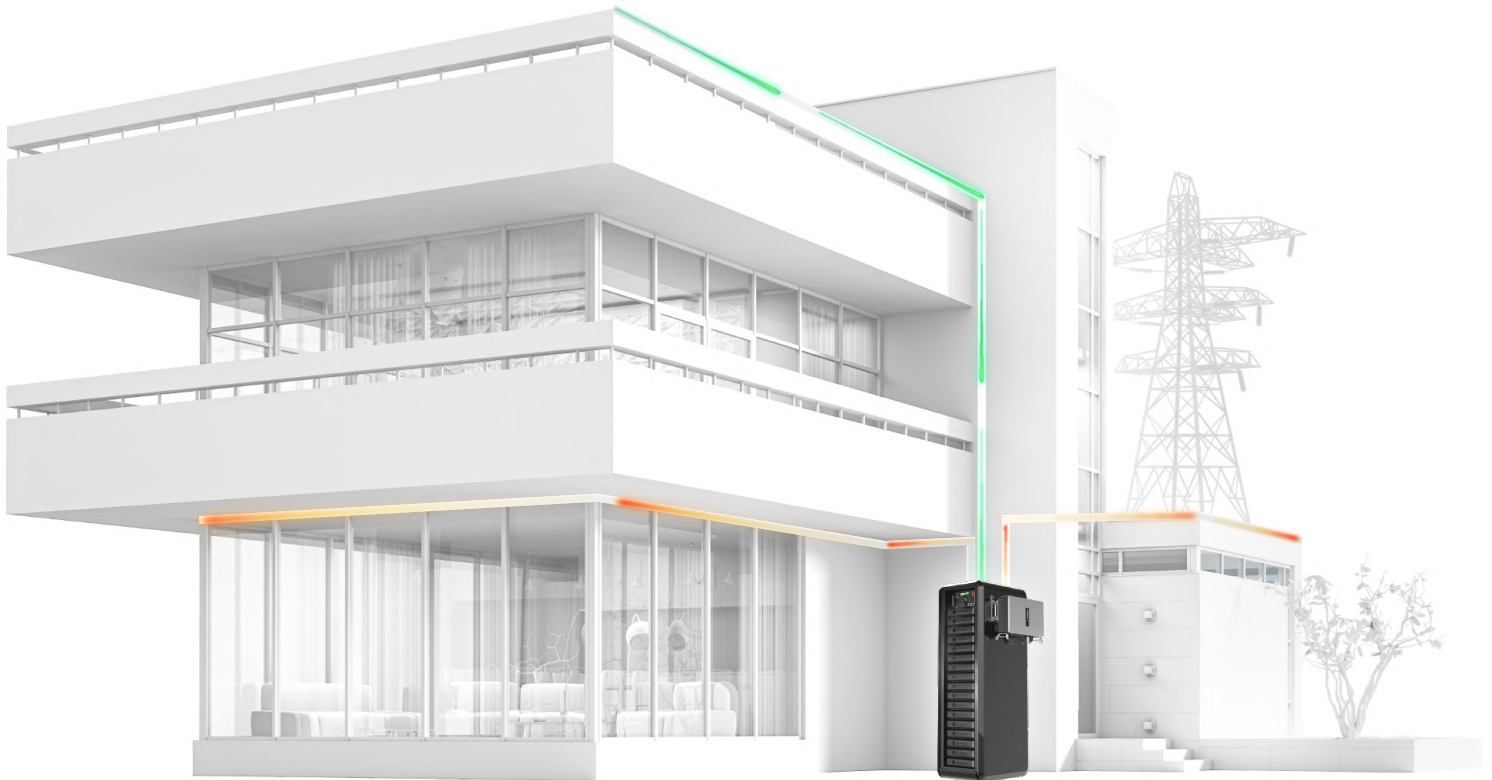


BMS structure  
capacitor-free designing,  
15-20 years of designing  
life

## High standard warranty



10 years or  
8,000 cycles@90% DOD



Customizable running modes

## High-efficient Operation.

To address your unique needs, Wattsonic offers various built-in operating modes. PV Power will adjust the loads, battery, and grid supply in different methods and sequences. Moreover, Cloud-based AI algorithms will continuously analyze the data. Automatically develop a more precise production and consumption pattern for your home.



General Mode



Peak load shifting Mode



UPS Mode



Off-grid Mode



Economy Mode



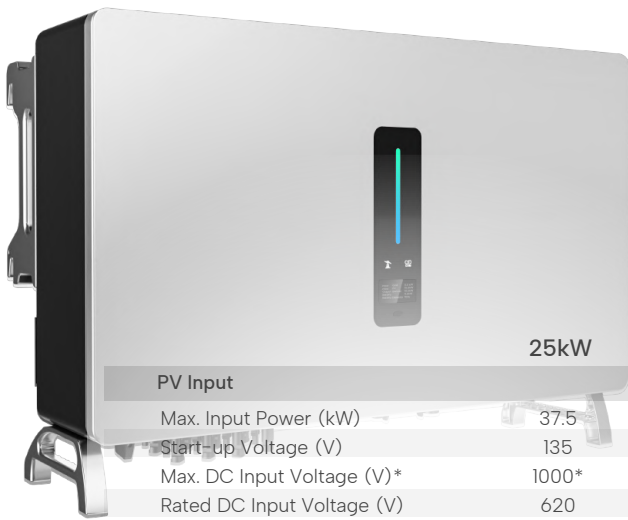
### Master BMS

Operation Voltage [Vdc]	150-900V/900-1500V(Need to confirm upon order)
Max. Charge/Discharge Current [A]	100
Recommend Charge/Discharge Current [A]	100
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/WiFi/LAN/GPRS
Power Connection Type	Amphenol MC4
User Interface	LCD Display(Optional, need to confirm upon order)
Dimension [W*H*D mm]	465*180*356
Weight	10kg
Operating Temperature [°C]	-20-55
Ingress Protection	IP21
Installation Method	Rack Mounted
Warranty	10 years



### 38.4V/3.84kWh Battery Module

Nominal Voltage/Capacity per Module	38.4V/3.84KWH
Expand Capability	String:Max. 1000V[20*3.84kWh], Optional 1500V[34*3.84kWh]
DOD Recommended	90%
Max. Charge/Discharge Current[A]	100A Continual
Recommend Charge/Discharge Current[A]	100A Continual
Communication Protocol/Connector Type	CAN/ RJ45
Power Connection Type	Phoenix
Dimension [W*H*D mm]	465*194*403.5 per module
Weight	40kg
Charge Temperature Range [°C]	0~45
Discharge Temperature Range [°C]	-20-55
Ingress Protection	IP21
Installation Method	Rack Mounted
Cables Connection	Connection at front
Warranty	10 years or 8,000 cycles@90% DOD



### Three Phase Hybrid Inverter

	25kW	30kW	36kW	40kW	50kW
<b>PV Input</b>					
Max. Input Power (kW)	37.5	45.0	54.0	60.0	75.0
Start-up Voltage (V)	135	135	135	135	135
Max. DC Input Voltage (V)*	1000*	1000*	1000*	1000*	1000*
Rated DC Input Voltage (V)	620	620	620	620	620
MPPT Voltage Range (V)*	200-850*	200-850*	200-850*	200-850*	200-850*
No. of MPP Trackers	4	4	4	4	4
No. of DC Inputs per MPPT	2	2	2	2	2
Max. Input Current (A)	30×4	30×4	30×4	30×4	30×4
Max. Short-circuit Current (A)	40×4	40×4	40×4	40×4	40×4
<b>Battery Side</b>					
Battery Type	Lithium Battery (with BMS)				
Battery Voltage Range (V)	135-750				
Max. Charge/Discharge Current (A)	100/100				
<b>Grid Side</b>					
Rated Output Power (kW)	25.0	30.0	36.0	40.0	50.0
Max. Output Apparent Power (kVA)	27.5	33.0/30.01)	39.6	44.0	55.0
Max. Input Apparent Power (kVA)**	30.0	36.0	43.5	48.0	60.0
Max. Charging Power of Battery (kW)	25.0	30.0	36.0	40.0	50.0
Rated AC Voltage (V)	3L/N/PE; 220/380V; 230/400V; 240/415V				
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	42.0	50.0/43.52)	60.0	66.0	83.0
Power Factor	0.8 leading ... 0.8 lagging				
Max. Total Harmonic Distortion	< 3% @Rated output power				
DCI	< 0.5%In	< 0.5%In	< 0.5%In	< 0.5%In	< 0.5%In
<b>Back-up Side</b>					
Rated Output Power (kW)	25.0	30.0	36.0	40.0	50.0
Max. Output Apparent Power (kVA)	27.5	33.0	39.6	44.0	55.0
Max. Output Current (A)	42.0	50.0	60.0	66.0	83.0
UPS Switching Time	< 20ms	< 20ms	< 20ms	< 20ms	< 20ms
Rated Output Voltage (V)	3/N/PE; 220/380V; 230/400V; 240/415V				
Rated Output Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Peak Output Apparent Power (kVA)***	30, 60s	36, 60s	43.5, 60s	48, 60s	60, 60s
Voltage Harmonic Distortion	< 3% @Linear load				
<b>Compliance</b>	IEC/EN 62109, IEC/EN 61000, EN50549-1, TOR Generator Type A, VDE-AR-N-4105				
<b>Protection</b>			<b>General Data</b>		
DC Reverse Polarity Protection	Integrated		Over Voltage Category	PV: II ; Main: III	
Battery Input Reverse Connection Protection	Integrated		Dimensions (W×H×D mm)	800×620×300	
Insulation Resistance Protection	Integrated		Weight (KG)	72.0	
Surge Protection	Integrated		Protection Degree	IP65	
Over-temperature Protection	Integrated		Standby Self-consumption (W)	< 15	
Residual Current Protection	Integrated		Topology	Transformerless	
Islanding Protection	Integrated		Operating Temperature Range (°C)	-30~60	
AC Over-voltage Protection	Integrated		Relative Humidity (%)	0-100	
Overload Protection	Integrated		Operating Altitude (m)	3000 (>3000m derating)	
AC Short-circuit Protection	Integrated		Cooling	Smart Fan	
			Noise Level (dB)	< 50	
			Display	OLED & LED	
			Communication	CAN, RS485, WiFi/LAN (Optional)	

\* PV Max. Input voltage is 850V, otherwise inverter will be waiting

\*\* Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery

\*\*\* The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is related to the overload power

1) AS 4777.2, VDE-AR-N 4105: 30.0kW 2) AS 4777.2, VDE-AR-N 4105: 30.0kVA 3) AS 4777.2, VDE-AR-N 4105: 43.5A

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